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THE RAILWAY GAZETTE
33, TOTHILL STREET, WESTMINSTER, S.W.1.

Trade Unions and Wages Award

TWO of the major unions representing the railway workers have accepted the award of the Ministry of Labour Court of Inquiry into wages and hours. These are the National Union of Railwaymen and the Amalgamated Society of Engineers & Firemen. In doing so they have stated that their acceptance is based on the view that the recommendations are an interim measure pending the holding of a further inquiry. Mr. J. Benstead, General Secretary of the N.U.R., in a statement after a meeting of members of that union, made it clear that the unions had been quick to seize on the point made by the Court of Inquiry that there was need for reconsideration of the grading of the various classes, skills, and categories which make up the complicated structure of the railway service. Elsewhere in this issue we deal with the various Court of Inquiry recommendations, and also with their implications, which are far-reaching.

Need for Steel Exports

An authoritative statement on the vital need for Great Britain to maintain a flow of exports in finished steel is made in the June *Bulletin* of the Iron & Steel Federation. The Federation has made a special survey of distribution of overseas trade in iron and steel in 1946 as compared with 1937, and has arrived at "certain conclusions of permanent significance." A number of Empire and foreign countries still look to Great Britain to meet essential needs, and failure to supply their minimum requirements of finished steel would result in the dislocation of the national economies, and of their capacity to supply us with food and raw material. It is pointed out, for example, that the development of the groundnut scheme in Africa is dependent entirely on steel rails, tubes, and so forth being made available from our production. The survey finds that although the amount of finished steel available for export is now very small, its importance to this country and our dependent markets is very considerable and greater even than its value as a provider of foreign exchange. The United States of America is now the greatest world exporter of steel, and has moved up from third place in 1937, since when its shipments have increased by 18 per cent. Exports of iron and steel products last year by America totalled 4,143,046 tons, and those of Great Britain were 1,860,591 tons. Belgium-Luxembourg exported 1,576,942 tons.

The First Home Railway Interim Dividend

The first of the interim dividends—that of the London & North Eastern Railway Company—was made known on July 4. As was generally expected, the payments are the same as those which were forthcoming 12 months ago; that is to say, the full rates are paid down to the 5 per cent. redeemable preference stock, and 1 per cent. for the half-year on the 4 per cent. second preference stock. In view of the financial clauses in the Transport Bill now before Parliament, it was unlikely that the directors would have made any variation in payments. The half-yearly statements of the other main-line railway companies are expected to be made in the case of the London Midland & Scottish on July 17, and the Great Western on July 18. The Southern Railway announcement will be made on July 24. The only company in which ordinary stockholders have any particular interest is the Great Western Railway on which for the past five years the interim distribution has been 2 per cent. The Southern Railway, by reason of its constitution, cannot make an interim payment on its deferred ordinary stock, but it is expected that the interim of 2½ per cent. preferred ordinary will be forthcoming.

Commons Debate the Post Office

In the House of Commons recently opportunity was taken during Committee of Supply for the Post Office to discuss some of the shortcomings of that institution. It was very clear from the general tenor of the debate that members were by no means satisfied with its operation. The question was raised as to whether the Post Office was to be considered as a revenue producer, a vehicle of taxation, or as an institution to give the cheapest and best possible service. In 1945-46 the profits on the postal services were £15,500,000, on the tele-

phone service £20,500,000, and the telegraph service had a small deficit of £38,000. The Postmaster-General said that in 1946 there were 82,150 postmen, and in 1947 the number was 85,868. The value of Post Office dealings with the public in 1946 was £3,500,000,000. It handled nearly 7,000,000,000 letters, 239,000,000 parcels, nearly 52,000,000 telegrams, more than 2,500,000,000 telephone calls, and had paid nearly 550,000,000 pensions. He added that the Post Office had been called on to release manpower for productive industry. The only way to do this was by cutting services. The impression was left that, despite some recognition of the need for improvement of postal services, the country was unlikely to experience them for many years. If similar arguments are used for maintaining an unsatisfactory *status quo* when transport is nationalised, the trading and travelling community have little to which to look forward with anything but the gloomiest forebodings.

Government's Export Target Deferred

The Chancellor of the Exchequer has announced that the Government has postponed the date by which it hoped that the export target of 140 per cent. of 1938 volume would be reached. Originally the date selected was the end of 1947, but now it is the middle of next year. The volume of exports over the past year based on 1938 as 100 has moved somewhat erratically. For the third quarter of 1946 it was 104, and for the fourth quarter, 111. For the first quarter of this year it was 100½, in April, 98, and for May, the latest available, it was 104, or the same as the third quarter of 1946. If the Government's target is reached, United Kingdom exports in the year mid-1947 to mid-1948 would be £1,130 to £1,350 millions, which would compare with the present rate of £1,100 millions a year. The Chancellor emphasises that to achieve the target would require a steady expansion of exports of all kinds, and this achievement would depend also on a reasonably free access to overseas markets.

Overseas Railway Traffic

In the fortnight ended June 28, which completes 52 weeks of the financial year, Buenos Ayres Western traffic showed decreases of ps. 25,000 and ps. 247,000, but the aggregate is ps. 6,186,000 above 1945-46. Buenos Ayres Great Southern receipts recovered to record an increase of ps. 29,000 in the 52nd week, after a preceding setback of ps. 327,000, and on the aggregate are up by ps. 4,798,000. The aggregate increases on the Buenos Ayres & Pacific and the Central Argentine are ps. 9,160,000 and ps. 3,949,824 respectively. From the 50th week onwards, earlier declines on the Central Uruguay Railway have been arrested, but the final result is £154,393 below the 52 weeks of the previous year. Great Western of Brazil traffic finish the half-year to June 28 with an aggregate increase of £114,100, unfavourable results during the period having been few, and not exceeding the loss of £1,300 in the 23rd week. Some results are compared below:—

	No. of week	Weekly traffic	Inc. or dec.	Aggregate traffic	Inc. or dec.
Buenos Ayres & Pacific*	52	2,400	+ 522	126,227	+ 9,160
Buenos Ayres Great Southern*	52	3,803	+ 29	188,086	+ 4,798
Buenos Ayres Western*	52	1,276	- 247	69,137	+ 6,186
Central Argentine*	52	3,345	+ 242	167,474	+ 3,950
Canadian Pacific	26	2,125,500	+241,000	37,706,250	+2,843,250

* Traffic returns in thousands of pesos

Canadian National results showed an aggregate increase of £5,073,750 for the five months to May 30.

Another U.S.A. Railway Merger

The Interstate Commerce Commission of the United States has changed its mind concerning control by the influential Atlantic Coast Line of the Florida East Coast Railroad. The original A.C.L. plan was denied by the I.C.C., and under another plan, control of the F.E.C. might have passed to the St. Joe Paper Company, which in its turn is controlled by the great Du Pont concern. The I.C.C., however, has now realised that the banking interests behind Du Pont might have influenced shippers unduly to route their traffic over the F.E.C. to the detriment of other competing companies, and that the St. Joe-Du Pont control was thus inadvisable in the public interest. The merger of the Florida East Coast with the Atlantic Coast

Line will have considerable operating advantages. Instead of the change of motive power now needed at Jacksonville with all through Atlantic Coast trains to and from the Florida coast resorts, through locomotive running will be possible between Richmond, Virginia, and Miami, Florida, as with the competing Seaboard Air Line trains, and in view of the extensive use by the A.C.L. and F.E.C. of diesel-electric locomotives, such through running will be a simple matter. The Atlantic Coast will also be able to work through between Albany (Georgia) and Miami with the through trains to and from Chicago and Cincinnati. A condition of the merger is that the Atlantic Coast continues to maintain all existing through services between the Florida East Coast and other railways. The purchase price fixed for the F.E.C. assets is \$40,500,000.

Post-War Mechanical Problems

When the Transport Bill was debated in the House of Commons, we referred to criticisms of the British railways made by Labour politicians. Some of these critics, notably Mr. Hugh Dalton, Chancellor of the Exchequer, appeared to believe that the condition and standard of performance of our lines were far below the levels attained in America. Our information was that the U.S.A. railways were wrestling with many of the difficulties which have beset the British systems since they passed under Government control. So far as post-war mechanical problems are concerned, the correctness of this opinion has been confirmed by Mr. F. K. Mitchell, General Superintendent, Motive Power & Rolling Stock, New York Central System. In a forthright address before the New England Railroad Club, Boston, Mass., on April 8, Mr. Mitchell analysed the effects of the war on the U.S.A. railways and outlined the kind of work which their mechanical engineering, motive power, and rolling stock departments would have to undertake in the immediate future. His address contains so much of interest to railwaymen in this country that we have no hesitation in reproducing on page 37 a somewhat lengthy abstract.

Fulmer Research Institute

This country has long been a leader in the field of pure science and fundamental research. In the application of the work of our scientists to industrial processes, however, there has been a tendency to lag behind, with the result that other countries frequently have been the first to benefit. For this reason, therefore, because science has a vital role to play in meeting the present economic crisis, everything possible should be done to shorten the time lag between scientific discovery and its practical application. In meeting this need, there is no doubt that the Fulmer Research Institute can play an important part. This centre, which was formally opened by Sir Stafford Cripps, President of the Board of Trade, on July 2, provides a service which has no parallel in this country, but which compares with the Mellon and other institutes in the United States. It is the only important research organisation in Great Britain where independently sponsored work can be carried out confidentially and where the results of research and any patents arising therefrom remain the property of the sponsor. The centre is open to consultation on everyday research problems, but its main programme is concerned with the evolution of new processes and products or the improvement of existing ones, and for the time being it is proposed to concentrate on problems covering metallurgical subjects, as outlined in other pages this week.

New G.W.R. Shunting Engines

Readers who have been passengers to or from Paddington during recent months probably will have noticed a number of locomotives of a new type, bringing the empty stock into and out of the station. These locomotives, of which ten have been built at Swindon, are the company's latest type for heavy shunting work or stopping passenger trains, and are known as the "9400" class. An illustrated article, containing a general description of the design, is published elsewhere in this issue. In the main, the new engines are a pannier-tank version of the "2251" class 0-6-0 tender engines, with slightly greater water and coal capacity. The cylinders, wheel diameter, and boiler

pressure remain the same as on the earlier "8750" class of pannier tanks with parallel boilers; but in the new engines the total service weight is 55 tons 7 cwt., as against 49 tons—a very useful increment for engines engaged on this class of work. The motion is the same as that of the "2251" class, and the drivers have remarked that, though massive, the Stephenson gear is quite easily reversed. Coil springs have given way to laminated springs for the trailing axle. A very wide cab is provided, and footplating is dispensed with along the sides of the cab and bunker. The "9400" class are of handsome appearance, and in that respect, as well as in their general proportions, are a great advance upon the older pannier tanks.

Railway Wages Award

THE Press generally has given greater prominence to the immediate alterations in railway wages and hours of duty recommended in the report* of the Court of Inquiry into the application by the railway trade unions for improvements in wages and reductions in weekly hours of work, than to its other conclusions. The Court, however, states that it has reached one over-riding conclusion to which everything else seems to be subordinate. This is its conviction that there is a paramount necessity for detailed and exhaustive reconsideration of the grading of the classes, scales, and categories which make up the complicated structure of the service.

It feels, however, that it lacks the expert knowledge and the time required to make such a comprehensive examination of the grading of railway workers with a view to a more accurate assessment of the relative value of the different types of work performed. A further vital need, in its opinion, is the desirability for consideration to be given to the rearrangement of inter-grade margins so that adequate incentive is given for the acceptance of higher responsibility consequent on promotion. This should take into account the mobility of labour, which is a feature of railway operation, and the difficulties and expense occasioned in present circumstances in any occupation involving transfer from one place to another. It suggests that, in view of the proposed nationalisation of the railway service, it is imperative that every effort should be made to ensure that the railways are provided with a properly organised labour structure.

It makes it clear, therefore, that its recommendations in regard to particular claims are to be regarded as an interim arrangement. These have been considered against the background of the general economic position of the nation; the recent Government White Papers; the rates of wages in comparable outside employment; the intrinsic merit of the case for improvement; and the necessity for bearing in mind the reaction of increased railway labour costs on the future level of railway charges. It makes no attempt to strike a balance between the advantages and disadvantages of railway employment compared with conditions in outside industry, but draws attention to a comment of the Industrial Court in 1922 that the railways constitute a separate entity in the industrial system of the country and the conditions therein cannot be assimilated to those in any other individual industry.

It expresses the view that the railway unions have established a case for some improvements in salaries and wages to bring them more closely into relation with the general level elsewhere, particularly in certain branches of the engineering and transport industries. It makes it clear that its recommendations are designed to meet the special circumstances of the railway industry at the present time and are not intended to serve as a basis for the general upward movement of wages as a whole. The report also notes that three of the four wage claims are for flat-rate increases, although the unions themselves have admitted that the practice of making such increases (followed during the war years) tends still further to narrow the margins as between the lower and upper grades and classes. On the other hand, it feels that any deviation from this principle at the moment might well prejudice subsequent re-classification and create new irregularities and anomalies.

Accordingly, in response to the unions' claims for a flat increase of £1 a week for all adult workers, the Court recommends that, as an interim measure, the basic rates of all adult workers covered by the various claims should be in-

creased by 7s. 6d. a week (£19. 10s. 0d. a year in the case of salaried employees), with appropriate adjustments for juveniles, as from the beginning of the first full pay period after June 30, 1947. It declines the claim of the A.S.L.E.F. that engine cleaners should not be subject to the rural rates and also the claims that Sunday work should be remunerated at double time rates instead of, broadly, time and three-quarters. It also rejects the claim that double time should be paid for all time worked between 4 p.m. and midnight on Saturdays.

So far as the claims for a shorter working week are concerned, the unions made it clear that although their ultimate objective is a 40-hour week (35 hours for clerical and supervisory staff), as an immediate measure they were willing to accept a 44-hour and 38-hour week respectively. In the view of the Court, it is impossible to justify the retention of the 48-hour week in the railway service against the march of events in other industries, and it recommends that a 44-hour week be introduced in its place without loss of pay, and that the hours of clerical staffs be standardised at 42-hours a week, without loss of pay, without prejudice to any more favourable arrangements already operating. This award, it suggests, should become operative concurrently with that relating to the increase in wages. The Court realises that the shorter working week will cause many administrative problems and suggests that these and various other claims could best be dealt with through the normal negotiating machinery.

These recommendations are not binding on the parties concerned, and it remains to be seen what line the railway companies will take, in view of their explanations to the Minister of Transport and to the Court of Inquiry of the reasons why they could not assume the responsibility for dealing with the present claims or take any action which might embarrass the Government or commit the British Transport Commission.

Effect of Increased Railway Wages on Rates and Charges

IF the award of the Court of Inquiry into the railway trade unions' application for increased wages and a shorter working week is accepted by, or on behalf of, the parties concerned, it is estimated that the cost to the railways in a full year would be over £29 millions, assuming that the staff continue to work the existing hours and are paid overtime for the time worked in excess of the new standard hours. If, however, sufficient additional staff could be recruited to enable the proposed shorter working week to be brought into operation generally, the total cost would be somewhat less.

The extent of such an immediate addition to railway wage costs can be appreciated when it is remembered that the railway salaries and wages bill in 1946 was £198,852,000 as compared with £105,042,000 in 1938. The Court of Inquiry fully realised that its award might have an important reaction on the financial position of the railways, and, therefore, on the future level of railway charges, which form such a substantial element on the cost side of the economic system as a whole.

In considering the implications of this probable 14 or 15 per cent. increase in the railway annual wage bill, it is necessary to bear in mind that the railways are still under Government control, and by the terms of the railway control agreement are entitled to fixed annual payments which aggregate £38,633,000 without regard to the net revenue actually earned. On May 12, the Minister of Transport informed the House of Commons that it was estimated that the railway net revenue during 1947 probably would be £32 millions short of the fixed annual payments to which they are entitled, and for this reason substantially higher increases in rates and charges were justified than those recommended in November last by the Charges Consultative Committee, but not authorised by the Minister, namely, that passenger fares should be increased from 33½ to 35 per cent. over pre-war, and goods train rates from 25 to 30 per cent. Sir William Wood confirmed the Minister's estimate in his evidence before the Court of Inquiry, and said that the decline in net revenue was due to the fall in the volume of traffic; the increase in expenditure caused by rising prices; and the fact that the reduction in traffic could not be proportionately offset by reduced expenditure.

The award of the Court of Inquiry clearly must have a most important effect on the level of charges, which has been kept

* Cmd. 7161. H.M. Stationery Office. Price 6d.

by the Government well below the economic level. Sir William Wood informed the Court of Inquiry that each additional £7 millions to be raised would require an increase of 3 per cent. in the pre-war level of railway charges, and, on this basis, to increase rates and charges to such a level as would yield an extra £29 millions a year, representing the minimum cost of the wage award, would necessitate rates and charges being increased by about 13 per cent.

On the assumption that the Government desires to maintain the existing preferential treatment of freight train traffic, this would mean increasing ordinary passenger fares from 33½ to about 46 per cent. over pre-war, and freight train rates from 25 to about 38 per cent. above pre-war. The Government, however, cannot very well delay any further a decision in regard to meeting the expected deficiency of £32 millions in railway revenue for 1947.

If the Minister should decide that charges are also to be raised sufficiently to earn this deficiency, passenger fares would have to be increased to something like 60 per cent. over pre-war, and freight train rates to about 50 per cent. If it is decided to cover only part of the estimated deficiency, lower increases would be necessary. It must be borne in mind, however, that such increases will not necessarily yield the additional revenue required, as some loss of passenger traffic must be expected as a result of any material rise in railway charges because of the greater use of private cars and passenger road services which would result, and there might also be a decline in freight traffic caused by a diversion to road transport. Increases of rates and fares to anything like the extent necessary will have wide repercussions on trade and industry at a time when exporters are beginning to experience competition from other countries.

These increases also must be viewed against the background of the Court of Inquiry's main conclusion that there is an urgent need for an exhaustive reconsideration of the whole grading of the various classes, scales, and categories which make up the complicated structure of the railway service, and a re-arrangement of inter-grade margins to give adequate incentive for the acceptance of higher responsibility consequent on promotion. Such a review, which the Court clearly considers should be made before the railway service is nationalised, inevitably will add a further substantial sum to the railway wage bill, and requires to be taken into consideration in connection with any alteration of the existing level of charges.

British Railway Statistics

AT the end of June the Ministry of Transport issued a Summary Table of Railway Statistical Returns for 1946. These statistics are on a comparable basis with the figures previously published for the years 1938 to 1945. The publication covers 28 items, beginning with "mileage of lines open for traffic" and ending with "electrical working of the railways," including those of the London Passenger Transport Board. Separate tables cover the working of the Board's railway and road passenger traffic.

In the absence of details of revenue receipts and expenditure, the main value of the statistics now released is for purposes of record. One can make nothing of the statement that the 34 railway canals are shorter by 16 miles than they were in 1938, without knowing the variation in receipts, working costs, and tonnage conveyed. Again, what use can be made of the advice that the railways have dispensed with nearly 1,000 ft. of dock quay during the same period, when figures are not appended to show either the volume of business passing through the docks or the financial results of their operation? We notice that railway steamships are not mentioned, though the restoration of a number of Continental and other services was one of the bright features of last year's working.

The point brought out most clearly by the statistics in the summary table is the weak state of our railway rolling stock. The position at the end of 1938 and 1946 is set out in tabular form below:—

RAILWAY ROLLING STOCK AVAILABLE

	1938	1946	Increase or decrease 1946 on 1938
Locomotives	18,469	18,752	+ 283
Passenger carriages	40,793	35,697	— 4,096
Other coaching vehicles	17,395	14,070	— 3,325
Merchandise and mineral wagons	644,789	593,177	— 51,612

The railways had to do a great deal of additional work in 1946 with an equipment which was inadequate largely because of restricted supplies of material and shortage of skilled labour. Passenger-miles were 54 per cent. in excess of 1938, the average journey having grown from 16 to 24 miles. Net ton-miles were 27 per cent. greater, and the average length of haul was 74 miles, as compared with 59 before the war. The crisis was surmounted by reducing coaching train-mileage by 17 per cent., with the inevitable result of overcrowding many trains.

That was rough on the travelling public, as the average receipt from a journey, excluding workmen and season-ticket holders, rose from 1s. 6d. to 3s. 10d. Freight-train mileage last year was 13 per cent. below the war-time peak, but remained slightly above 1938, and it is satisfactory that the percentage of loaded wagon-miles to the total of loaded and empty was 74 in 1946 as compared with 67 in 1938.

Thanks to the establishment of the Inter-Company Freight Rolling Stock Control in 1941, a statement of the number of wagons forwarded under load can now be furnished. The 1946 number was 39,766,000, as compared with 45,068,000 at the peak of wartime traffic in 1943, a decrease of nearly 12 per cent.

Why should a weekly figure of wagon loadings not be published regularly? Additional work would not be caused to the Rolling Stock Control, which compiles the figure for its own purposes. The U.S.A. railways announce their loadings within a fortnight of the traffic passing, and a week later analyse the forwardings under eight commodity headings. The Canadian railways follow this lead, so that the public knows currently the trend of the Dominion's traffic. Only in Great Britain are statistics kept in cold store until they have lost all vitality.

The next item in the summary table indicates the indifferent quality of the coal supplied to the railways since the Government took control of both the lines and the collieries. Coal consumption per engine-mile for coaching and freight steam train working went up from 52.5 lb. in 1938 to 64.3 lb. in 1946. The last entry of all records that passenger train-miles worked by electric power fell from 79,878,000 in 1938 to 73,344,000 in 1946, or by 8 per cent. The L.P.T.B. cut its train-miles more rigorously than the main-line systems, but, by increasing the length of many trains, ran 4,500,000 more railway car-miles last year than in 1938. The Board was thus able to carry the record number of 589,000,000 railway passengers, nearly 20 per cent. more than the 1938 carryings.

The summary tables would excite more interest if they were accompanied by a running commentary on the interpretation of the statistics. The Ministry of Transport is content to indicate the procedure adopted in preparing the tables. If a paper of this kind is to have any wide appeal, something more than a series of bald explanatory notes is required.

High-Capacity Wagons

IN our correspondence columns we print a letter from Mr. E. R. B. Roberts suggesting that the adoption of 50-ton wagons as a standard type would cure most of our railway ills, financial and otherwise. The sight of three 50-ton wagons passing St. Neots loaded with bricks has led our correspondent to make sweeping statements about the general use of high-capacity wagons. If he had inquired about the history of these wagons, he would have found that the type was introduced by the old Great Northern Railway. Long experience in working the 50-ton wagons has not justified the multiplication of the type, though the brickfields in the Peterborough district, being the largest in the country, can make up large wagon loads readily.

This G.N.R. experiment was one of many efforts made by our railways, during the last 50 years, to instal large wagons. None of the companies succeeded in using wagons of the size customary in America on a large scale, owing to the different conditions which prevail here both in transport and in general industry. A brief statement of the British freight rolling stock position will, however, show that our railways have not been lacking in enterprise, and have increased average wagon capacity in a manner suited to our unique traffic requirements.

The Ministry of Transport returns for 1945 gave the follow-

ing particulars of ordinary merchandise and mineral vehicles owned by the main-line railways:—

Capacity	Number
Under 12 tons	138,000
12 or 13 tons	415,000
Over 13 and under 20 tons	15,000
20 tons and over	36,000
Total	604,000

Type	Number
Open merchandise	317,000
Covered merchandise	149,000
Mineral	138,000
Total	604,000

The average capacity of these wagons was 12.73 tons. This average will increase steadily as the old wagons holding less than 12 tons are broken up and replaced by standard vehicles. Since 1938, about 42,000 obsolete wagons have been scrapped.

The 1945 returns do not give an analysis of the 36,000 wagons built to carry 20 tons and over, but details for 1938 are available and there has not been much change since. In 1938 the precise number of large wagons owned by the railways was 34,372, composed of 4,096 open merchandise wagons, 208 covered wagons, and 30,428 mineral wagons. The railways thus possess sufficient large merchandise wagons to test the possibilities of concentrating traffic into heavy loads. They have found that the scope for such a method of working is limited. Even war conditions failed to raise the average wagon load at starting point, for merchandise in classes 7 to 21, beyond 4 tons 11 cwt., as compared with 3 tons in 1938. The tendency during recent years has been for consignments to become smaller, and traffic cannot be accumulated at forwarding points for lengthy periods. If goods are not despatched immediately, traders will transfer their custom from rail to road haulage.

The railways have made more progress in persuading traders to use wagons of 20 to 22 tons capacity for heavy merchandise in classes 1 to 6 and for coal class traffic. Plans to instal wagons of higher capacity have not been developed extensively. The L.M.S.R. 40-ton wagons, to which Mr. Roberts refers, are confined to special workings. In the early years of this century the North Eastern Railway provided a few 32-ton wagons and a hundred 40-ton wagons for the carriage of coal from the Ashington collieries in Northumberland to North Blyth staiths. Trials proved that the use of 40-ton wagons could not be extended with advantage, and the 20-ton hopper type, on four wheels, became the standard N.E.R. mineral wagon. In 1938 the L.N.E.R. owned 25,500 of these larger mineral wagons, but still provided a number of smaller "hoppers" to meet the needs of certain collieries in the North Eastern area.

Between the wars, the Great Western Railway endeavoured strenuously to popularise 20-ton mineral wagons in South Wales. Most of the coaling appliances at railway ports also were strengthened at great cost to take 20-ton wagons, but few of these shipment places could handle larger loads. The Standing Committee on Mineral Transport, appointed after the 1926 labour troubles, strove to induce the coal trade to accept the 20-ton wagon as the standard vehicle for landsale as well as shipment traffic, but failed to overcome the preference, outside the North Eastern area, for the 12-ton wagon. Two steps ahead were taken, however, during the present period of Government control. The stock of ironstone wagons was increased by 3,500 wagons of 20-22 tons capacity, and in 1943 the Ministry of Transport authorised the construction of 10,000 end-door mineral wagons with a capacity of 16 tons, instead of the 13-ton limit in the case of the standard end-door coal wagon.

To sum up the situation in this country, while the average capacity of our wagon stock should increase gradually, 12-ton units are likely to remain the most suitable vehicles for carrying high-class merchandise; the 20- to 22-ton wagon may become standard for low-class merchandise and mineral traffic; but the field for the use of vehicles of higher capacity will be limited.

At the present time the American railways are uneasy about their wagon situation. They are not satisfied either with the turnround of their big wagons or with the relation between gross tonnage hauled and net revenue tonnage carried. Further, it is a question whether the user of expensive 50-ton wagons for less-than-wagon-load traffic is a paying proposition. Finally, Mr. Roberts, and critics of his school, overlook one decisive point—the financial position of the American railways, as a

whole, has deteriorated as their wagon loads and colossal train loads have grown in size. High-capacity equipment has not produced better dividends for American railway stockholders, in spite of abounding prosperity in general industry. Why should the installation of similar equipment on the British railways be expected to have the opposite result at a time when many of our industries are struggling for their existence?

U.S.A. Railway Operations in 1946

ON April 4 we reviewed the results of U.S.A. railway operations in 1946. Our article was based on a preliminary analysis of railway performance prepared in December last by Dr. J. H. Parmelee, Director, Bureau of Railway Economics, Association of American Railroads. On June 20 we received a reprint of Dr. Parmelee's survey with figures revised to April 15. A comparison of this booklet with the original version shows that, as usual, few adjustments have been required in the estimated figures to arrive at exact statistics. Not a single change of first-rate importance has been called for in the conclusions based on the information available at the end of the year, but we comment on a few points worth noting.

A sharp rise in the volume of freight traffic occurred in the closing months of 1946 and continued during the first five months of this year. On January 1 increases in freight rates, averaging about 17.6 per cent. for the States as a whole, took effect, and are estimated to produce added revenue of \$985 million in 1947. That represents an advance of \$15 million on the previous estimate. Net ton-miles in 1946 were underestimated by 1.5 per cent.; at 592,000 million, the ton-mileage was 13 per cent. below 1945, not 14 per cent. as the comparative freight traffic summary in our April 4 number showed.

The opinion expressed about the growth of air competition was correct. Scheduled airlines flew 5,900 million passenger-miles, equivalent to 9 per cent. of the railway passenger-mileage.

Operating revenue for the whole of 1946 was 11.4 per cent. below 1945. Operating expenses appeared on paper to be lower by nearly 10 per cent., but that was due mainly to the inclusion of large amounts of amortisation charges for defence projects in 1945. Transportation expenses reached the record of \$3,212 million, an increase of \$196 million, or 6.5 per cent., over 1945. These expenses—the largest item of expenditure—reflect the direct cost of handling and moving traffic.

The 1946 net railway operating income was \$619 million, the lowest figure for any year since 1940, when an income of \$682 million was earned. Last year the rate of return on total property investment, after deducting accrued depreciation, was 2.74 per cent. This was less than the average for the 5-year period 1936-1940, and, had it not been for a carry-back tax credit of \$170 million, would have been about the same as the rate of return in the worst period of railway history between 1931 and 1935. A substantial increase in net earnings is expected this year. Many industries in the States are thriving, and unless the railways can secure a fair share of the general prosperity, they will be unable to attract the fresh capital needed to improve their equipment and services.

It has been said that "in one respect the railroads perhaps surpass all other industries, that is in the production of freely available statistics that reveal in detail every aspect of their daily and yearly performance." Certainly in the prompt circulation of statistics, with an elucidative commentary, the Interstate Commerce Commission and the Association of American Railroads set an example which our Ministry of Transport and the British Transport Commission, when it comes into being, would do well to imitate. At the time of writing, we have before us not only Dr. Parmelee's review of railway operations, but also the detailed results of 132 American Class 1 railways for 1946. In addition, we have a statement of the revenues and expenses of each railway for the three months ended March 31, 1947, with comparative figures for 1946.

We thus had at hand fairly exhaustive and up-to-date information about American railways before the Ministry of Transport issued at the end of June a summary table of railway returns for 1946, covering a limited number of statistical items. We deal with this paper in a separate article, merely remarking now that separate particulars are not given for the four main-line companies and that not a single financial statement is included.

LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

A Museum of Railway History

London & North Eastern Railway.
Dorset Square, London, N.W.1, July 1.

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Replying to Mr. Howard W. Linecar's letter in your issue of June 6, the York Railway Museum and its contents, save those which are on loan, form part, of course, of the "poor bag of assets" which the State will take over next year.

The Railway Museum at York is, for all practical purposes, a national one, and although, owing to difficulties caused by the war, it has not been possible to accommodate one or two suggested fullsize exhibits such as locomotives, it has in no other case closed its doors to railway historical relics from any part of the country; indeed, exhibits are offered spontaneously from time to time from all parts of the country, thus affording an indication of the extent to which the national character of the museum is recognised.

When the present accommodation problems are solved, the York museum will be capable of still further development on a national basis, and in this there is no doubt that models could play an extremely useful part, especially to depict locomotive, rolling stock, and signalling evolution.

As to Mr. P. E. Davis's letter in your June 27 issue, it is correct that the L.N.E.R. Museum authorities arranged for the dispersal of the relics from York early in the war. I do not think that the collection should be divided, as the number of places to which the student of railway history has to travel to pursue research should be kept to the minimum.

Yours faithfully,

GEORGE DOW,
Press Relations Officer

Power Reverse Gears

61, Rupert Street,
Glasgow, C.4. June 26

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Your interesting editorial note on "Power Reverse Gears" in the June 20 issue prompts me to remark how the design of various locomotive details has "progressed" backwards since the grouping, and reversing gears can be included.

Many of our railways prior to the amalgamation fitted steam reversers to a large number of their locomotives, but since then the companies have appeared to consider the slow and awkward screw reverser as the acme of perfection, and our "A4s," "Duchesses," "Nelsons," and "Kings," not to mention goods engines (which spend a large proportion of their time in shunting), all are fitted with it, though it is refreshing to note that Mr. Bulleid, in his interesting and original designs for the Southern, is fitting steam gear.

No doubt the usual parrot-cry of "maintenance" will be put forward as an excuse for not fitting power reversing, but as steam reversers are used largely on Colonial railways, where mostly native labour, probably much of it unskilled, is available, this argument hardly carries much weight.

It is worth mentioning that during the years 1903-12, steam reversers were standard on the passenger tender (and many other) locomotives of all the Scottish lines with the exception of the Great North, which never used it, and were in use on other English lines apart from those you mention, being standard on the excellent London, Tilbury & Southend engines of Mr. Thos. Whitelegg; and also were on a number of Lancashire & Yorkshire locomotives.

As you state, Mr. James Stirling, on the Glasgow & South Western, was the pioneer of steam reversers, and on the G. & S.W. alone the gear was used in many forms and positions, the most common being in the cab with the cylinders horizontal

or inclined, the connection to the reversing shaft being either by a rocking lever or direct.

On the Stirling 0-4-4 tanks, the gear was placed horizontally under the platform; the 0-4-0 tanks of Mr. Manson had the cylinders placed one above the other (on the footplate), the piston rods coming out at the back of the cylinders and joining a crosshead to which the reversing rod was connected. Another form was found on the "326" class 0-4-4T, which had the usual horizontal cylinders but with the reversing rod fitting on to a projection on the piston rod between the cylinders.

When Mr. Peter Drummond succeeded Mr. Manson, he brought his brother's form of gear from the Highland, placing the cylinders vertically between the frames; Mr. Whitelegg, on the Baltics, used the same type, but placed horizontally.

An interesting form of steam gear was fitted by the Vulcan Foundry to a number of engines for Burma, and resembled the marine type in that a floating lever (marine, "hunting gear") was fitted so that in whatever position the reversing lever was placed, the motion took up a corresponding position; a similar arrangement was used by Aspinall on the Lancashire & Yorkshire 0-8-0, also by Robinson on the Great Central 0-8-4T.

You mention also air reversing gears, but these are by no means as versatile as steam gears for two reasons: (1) they can be fitted only where compressed air is available; and (2) are not capable of as fine adjustment.

I see you credit Ramsbottom as inventing screw reversing in 1859; a reference to Mr. McEuan's articles on the Caledonian engines in *The Locomotive*, July, 1943, page 106, will show that some form of screw gear was in use several years previously.

Yours faithfully,

MONTAGUE SMITH, JUN.

The 50-Ton Wagon

Eynesbury, St. Neots. June 16

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—A recent issue reported that, in Parliament, it was stated that it was not practicable to use the large types of American wagons on the British railways. But only a few days ago, I noticed on a passing train, next to the engine, three N.E.R. 50-ton wagons—the equivalent of fifteen 10-ton wagons—carrying bricks in the direction of London! If these wagons can be used in one part of the country, they can be used in any other part—as the lines (including colliery and other private sidings) are all built to the same standard national gauges.

The misunderstandings which exist among traders and the public in regard to the practicability of using 50-ton wagons on our railways undoubtedly would soon be removed—leading to their rapid introduction—if the railway companies used their advertising space for publishing pictures of a portion of the above train—locomotive, three 50-ton wagons, and a few 10-ton wagons—in order to show their size in proper perspective. The L.M.S.R. 40-ton self-discharging wagon also might be advertised, and its advantages explained.

By adopting the N.E.R. 50-ton wagon as a standard type, and fitting it with strong automatic Buckeye couplings, the numerous accidents to staff that occur in shunting operation on the British railways would be avoided. A drastic reduction would be made also in the repairs bill—normally, about ten times as much as in other countries. Standardisation also would eliminate the necessity of keeping thousands of spare parts in depots all over the country for repairing the present great variety in types of wagons which, in other countries, have been reduced to under a dozen.

If railway shareholders devoted only a fraction of their time to securing the aforesaid improvements, they soon would have no reason to complain of their dividends—nor the staff of their wages.

Yours faithfully,

E. R. B. ROBERTS

[This letter is the subject of editorial comment on page 32.—
Ed., R.G.]

Publications Received

Swindon Works. London, 1947: The Great Western Railway. Paddington Station, W. 2. 9 in. x 6½ in. 64 pp. Many illustrations, and folding plan of the works. Price 2s. 6d.—In pre-war years barely a summer week-end passed without one or other of the railway enthusiasts' societies paying a visit to Swindon Works. On the outward journey, perhaps, partisans of Crewe, Doncaster, and Eastleigh would

proclaim what they considered were the superior merits of their favoured companies' locomotives, but usually the peculiar fascination of Swindon had taken effect by the time of the homeward journey, on which they would listen respectfully to their colleagues expounding G.W.R. locomotive practice. Today such visits are being revived, and attended not only by those who knew Swindon before the war, but by a new generation of the apparently inexhaustible stock of loco-

tive enthusiasts. They now have at their disposal this illustrated guide to Swindon Works, with an illustrated history of the long tradition of G.W.R. locomotive design. The Carriage & Wagon department is dealt with also, and in its concluding pages the book outlines the varied welfare and recreational activities which the G.W.R. undertakes for the employees at one of the largest railway establishments for the construction and repair of locomotives, carriages, and wagons.

The Scrap Heap

FIRST CLASS JOURNEY

Two men travelling on the "Bournemouth Belle," the luxurious chocolate and cream all-Pullman express, were loud in their praise of it—the speed, the comfort, the service, even the ice-cream served. No one in the carriage could help hearing.

They were Americans. What is more, they had first class tickets, and were travelling, they later discovered, in a third class Pullman.—From "The Star Man's Diary" in the "Star."

GOVERNMENT SUBSIDY FOR TRANSPORT?

Lord Nathan rests his reply [to protest in the House of Lords on the meagreness of compensation to railway stockholders] simply on the inadequate contention that, although many investors felt that their income was being "unfairly diminished," they would have fared even worse if there had been no nationalisation plan—because there were limits to the extent to which their position could have been "ameliorated" by increased charges. As to that, the future will show; or is this an oblique admission that Government subsidisation is in prospect, despite the apparent safeguards in the Bill?—From "The Economist."

THREE YEARS LATE

The American publication *Trains* recently contained an account of a train which reached its destination three years behind time. On the old Gulf & Interstate Railway (now a part of the Gulf, Colorado & Santa Fe), a train was running on the 44-mile section between Bolivar and Beaumont at the time of the hurricane on September 9, 1900. The train reached Bolivar, but 30 miles of the track behind the train were destroyed. The small and impecunious Gulf & Interstate could not face the extensive reconstruction at once, and it was more than three years before

the track was restored sufficiently to permit the isolated train to return to Beaumont on October 1, 1903, three years, 23 days late.

100 YEARS AGO

From THE RAILWAY TIMES, July 10, 1847

MIDLAND RAILWAY (BRISTOL and BIRMINGHAM SECTION).—TENDERS for SLEEPERS.—The Directors of the Midland Railway are prepared to receive TENDERS for the SUPPLY of 30,000 SLEEPERS, either of Memel, Oak, or creosoted Pine.

24,000 of the Sleepers shall not be less than 8 feet 9 inches long, and 10 x 5 scantling, rectangular. The remaining 6,000 shall not be less than 9 feet long, and 11 x 5 scantling.

Samples of both sizes of Sleepers must be sent to the Engineer's office, Birmingham, two days before the day of letting.

All the timber must be sound, and free from sap and other defects. The deliveries must be made at the rate of 6,000 per month; the first 6,000 to be delivered during the month of August. They may be delivered at any First-class Station between Birmingham and Gloucester.

The tenders, addressed to the Secretary of the Bristol and Birmingham Railway, and endorsed "Tender for Sleepers," are to be sent to the offices, Lawley-street, Birmingham, before eleven o'clock on the morning of Wednesday, the 28th instant.

By order,

JOSEPH SANDERS, Secretary.

Birmingham, July 8, 1847.

MIDLAND RAILWAY.—BRISTOL and BIRMINGHAM SECTION.—TENDERS for CHAIRS.—The Directors of the Midland Railway are prepared to receive TENDERS for 1,000 Tons of CHAIRS, to be delivered at any First-class Station on the Midland Railway between Birmingham and Gloucester.

The deliveries are to be made at the rate of 250 tons per month; the first 250 tons during the month of August, 1847.

Patterns of the Chairs may be seen at the Engineer's Office, Derby.

The Tenders, addressed to the Secretary of the Bristol and Birmingham Railway, and endorsed "Tenders for Chairs," are to be sent to the offices, Lawley-street, Birmingham, before eleven o'clock on the morning of WEDNESDAY, the 28th instant, and they must give an exact description of the qualities and mixture of iron proposed to be used.

By order,

JOSEPH SANDERS, Secretary.

Birmingham, July 8, 1847.

EXPRESS POST IN 1907

Fifty years ago residents in city and urban areas had 20 postal deliveries a week. Now, postally speaking, the residents in even the largest city are cut off from the outer world from Saturday noon until Monday morning. In Cambridge, for example, there are now eleven deliveries a week only.

Forty years ago one could post a letter in Liverpool and have it delivered on the breakfast table while one travelled overnight from there to East Anglia; it now takes two days.

There were few labour-saving devices in those days; horse-drawn mail vans, postmen on foot, telegraph boys on foot and on pedal cycles, and yet, with every modern expensive device at their disposal, deliveries take longer.

I have honestly sought a reason for this gradual slowing down. In all cases, examined, working conditions are better, there is more trade unionism, hours of work are fewer, wages are higher with paid holidays and paid sickness. I find it all so very puzzling.—J. R. Clementson in a letter to the "Daily Express."

FOUND DEAD ON CARRIAGE ROOF

A man was found dead on the carriage roof of a G.W.R. train when it was stopped at Southall on July 8. He was identified as a resident of Yiewsley, Middlesex, and it is assumed that he fell from a bridge over the line near which his bicycle was found.

RAILWAY MODELS AT PADDINGTON

Working models of two famous engines which have taken twelve years to complete are on view to the public on the Lawn (the circulating area) at Paddington Station. A personal gift from the maker, Mr. B. R. Hunt, of Johannesburg, to the Directors of the Great Western Railway, they are the G.W.R. "Cornish Riviera Express" coach drawn by the engine *King George V*, and George Stephenson's *Locomotion No. 1*, together with the first closed carriage *Experiment*. In another case is a display of miniature engine tools. These models, housed in a showcase 26 ft. long, have been declared by experts to be some of the finest built.

COPYING OUR "TUBE"

London Transport's underground railways will be the model for an underground railway system which is planned for Istanbul. Dr. Lufti Kirdar, Governor of the Province and Mayor of the city, who is visiting this country, has called at the offices of London Transport for consultation. I understand he told officials that Istanbul is suffering from the same congested traffic problems as London. The point has been reached when it has been decided to explore the possibility of diverting as much public transport as possible underground. Turkish officials have in mind London's system, which has the reputation of being the finest in the world.—From "London Letter" in "The Western Morning News."

CIVIL SERVICE STAFFS

Mr. Dalton, Chancellor of the Exchequer, in the House of Commons, has circulated the following table showing the number of non-industrial Civil servants, in departments with over 1,000 staff, in April, 1939, and April, 1947:—

Department	1939	1947
Admiralty	12,923	35,446
Agriculture	2,591	6,233
Air Ministry	19,677	24,907
Assistance Board	8,118	8,194
Civil Aviation	—	4,110
Colonial Office	450	1,140
County Courts	2,482	1,596
Customs & Excise	14,728	12,446
Education	2,078	2,898
Food	—	43,030
Foreign Office	1,729	6,971
Do. (German section)	—	1,947
Forestry Commission	509	1,334
Fuel & Power	461	6,489
Health	6,676	5,087
Home Office	2,493	3,920
Information, Central Office	—	1,608
Inland Revenue	24,645	47,651
National Insurance	28,339	41,673
National Savings Committee	—	13,957
Ordnance Survey	229	1,033
Pensions	2,530	3,842
Post Office	3,048	12,324
Prison Commission	205,143	262,372
Registrar General's Dept.	3,599	4,280
Scientific & Industrial Research	1,502	1,404
Stationery Office	1,594	2,248
Supply	—	2,978
Supreme Court	—	41,383
Town & Country Planning	1,374	1,626
Trade	—	1,043
Transport	4,248	15,164
Treasury	2,968	10,073
War Damage Commission	357	1,137
War Office	—	2,658
Works	19,828	44,985
Agriculture Dept., Scotland	6,273	20,787
Health Dept., Scotland	659	1,376
	991	1,013
Total	382,709	702,363



"It's getting a bit much when the only reliable place in London for lunch is the one-five to Glasgow"

[Reproduced by permission of the proprietors of "Punch"]

OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

INDIA

Pay Commission's Report

The Central Pay Commission, which was appointed in May, 1946, submitted its report on May 16 this year. A minimum salary of Rs.55 a month (Rs.30 basic plus Rs.25 dearness allowance), and a maximum of Rs.2,000 a month (to be relaxed only in the case of a few select posts), are among the main recommendations of the commission. For the average clerical and similar appointment, the minimum salary is put at Rs.55, plus Rs.35 dearness allowance. These recommendations have been accepted by the Government of India.

It is stated further that the decisions now announced will cost the Government an additional Rs.30 crores (£22.5 millions) a year, of which Rs.24 crores (£18 million) will go to the Railway and Post & Telegraph Departments. The commission also recommends that the age of retirement should be 58 for all services, but the Government should have the option to retire an employee on the grounds of loss of efficiency at 55, or to grant him annual extensions after that age.

Simplified Scales

The most important feature of the commission's recommendations from the point of view of railwaymen is the simplification of the pay structure. The commission has recommended about 20 scales of pay for Class 3 services on the railways, and only three for Class 4 services as against the many hundreds that obtain in these two classes today. This class nomenclature is recommended as a substitution for the terms "subordinate" and "inferior" which were used before. Class 3 service will be extended to include skilled artisans, as the Pay Commission considers that "no difference should be made between training in letters and training in craft."

Cost of Living Adjustments

Until the cost of living stabilises itself, dearness allowance will continue to be added to the basic salary. A survey will be made every six months, and any variation of 20 points in the cost of living index, either upwards or downwards, will determine the change in the allowance. A higher basic wage and the increased dearness allowance have been designed to absorb other allowances or concessions to railwaymen, whether in cash or kind, granted so far to meet the high cost of living.

SOUTH AFRICA

Natal to Cape Link

The Minister of Transport announced to a deputation of members of Parliament recently that Parliament will be asked to sanction the linking up of the Natal and Cape Eastern railway systems. The link will be between Kokstad and Umata, a distance of 159 miles, and the cost is estimated at £1,500,000. The railway administration also intends to provide for travel between Cape Town and Durban by road as well as rail. A luxury bus service between Cape Town, Mossel Bay, Port Elizabeth, East London, and Durban is to be introduced. The decision to link the two railway systems means that the present long journey between Kokstad and East London, which now includes a journey through the Free State, will be eliminated.

Apart, therefore, from bringing East London and other eastern Cape towns within quicker reach of Durban, the new line will play an important part in conveying great numbers of cattle to the Durban market. Sympathy was expressed by Mr. Sturrock with the desire for improvements in the East London—Cape Town, and Aliwal North—East London train services. His view was that a direct service between East London and Cape Town could be justified, perhaps twice a week.

CHINA

Restoration of Railways

At a recent Press conference it was stated that out of a total of 11,309 miles of railways in China, 6,283 miles were in operation on June 15. Three months earlier, 7,266 miles were in operation, but railway mileage in the north-east had been reduced by military operations from 1,936 miles to 1,161 miles. In the three months to June 15, miles open on the Lunghai Railway were increased from 866 to 877, while miles of the Tientsin-Pukow Railway in operation increased from 407 to 422. The restoration of the 70-mile Nanchang-Kiukiang Railway and the addition of 98 miles to the Chekiang-Kiangsi Railway in the same period were instanced as important developments.

UNITED STATES

Unprofitable Train-Mileage

Mr. Ralph Budd, President of the Chicago, Burlington & Quincy, said at the annual general meeting of the company that there were indications of a further decrease in the total railway passenger business, coupled with a probable disappearance of profits from passenger services, except those operating between large centres of population. He said that his system would like to eliminate 10,000 train-miles a day of unprofitable journeys, or approximately 25 per cent. of its total passenger train-miles. The services concerned averaged only about 1½ persons per train-mile, the volume of traffic showing a decrease of 75 per cent. so far this year, compared with 1946.

Mr. Budd said that his system lost approximately \$400,000 a year on its suburban services, but experiments were being undertaken to effect changes in equipment which might improve the situation by providing greater passenger capacity on shorter trains. One proposal being considered was a double-deck coach for suburban services.

TURKEY

Railway Development Plans

Important credits were approved recently by the Turkish Parliament for the development of the Turkish railway system and the improvement of certain ports. For the extension of existing lines and for the building of new ones, the sum of £1,385,000,000 has been earmarked, while £1,150,000,000 has been allocated to the port improvement programme. In addition, £1,160,000,000 has been approved for completion of the line which is to connect Turkey with Persia via Bitlis and Van, to the south of the Lake of Van.

The construction is contemplated of a new line between the Black Sea port of Trabzon (in eastern Turkey) and Erzerum.

BELGIUM

Reductions in Transport Staff

During the recent debate on the budget of the Belgian Ministry of Communications, M. Van Acker, the Minister of Communications (and former Belgian Premier), stressed the necessity of sweeping reforms in the field of transport, with a view both to rationalising services and reducing expenditure. The Minister was very outspoken regarding the behaviour of certain personnel of the public transport undertakings, criticising particularly the abuse of sick leave and other irregularities. He announced that the staff of the public transport undertakings in Belgium was to be reduced shortly by some 10 to 20 per cent.

AUSTRIA

Tests with Swiss Equipment

Electric locomotives and light steel coaches lent by the Swiss Federal Railways and the Berne-Lötschberg-Simplon Railway are being used in Austria for experimental purposes, with a view to future developments. Test runs are taking place in the presence of experts on the electrified sections of the Austrian State Railways in the neighbourhood of Innsbruck, Linz and Villach. The Austrian railways are undertaking an extensive electrification programme, some details of which were given in *The Railway Gazette* of April 25.

JUGOSLAVIA

New Standard-Gauge Line

Reference was made in *The Railway Gazette* of March 7 to the opening of a standard-gauge railway from Brcko to Banovici, and the intention of extending it southwards to Sarajevo. It is now reported from Belgrade that an alternative standard-gauge route to Sarajevo is being built, forming an extension of the existing 13-mile line from Strizivojna-Vrpolje (on the Belgrade—Zagreb main line) to Samac, on the Sava River.

After crossing the Sava by a bridge 2,624 ft. long, the railway will follow the Bosna River. The present narrow-gauge line between Slavonski Brod and Sarajevo will be joined at Kotorosko, 50½ miles south of Slavonski Brod, and 8 miles north of Doboj.

To the south of Doboj, the new line will incorporate in part the existing narrow-gauge line, widened to standard gauge; and elsewhere will follow a new alignment.

The distance between Samac and Sarajevo will be 149 miles. The first section (Samac—Doboj) is under construction already.

The new railway includes five tunnels, the three longest of which will measure 8,856 ft., 4,920 ft. and 1,148 ft. Like the Brcko—Banovici line, it is being built with unpaid labour supplied by members of the Yugoslav Youth Organisation, of whom 180,000 have been enlisted, who will work in turns. They are being assisted by 200 members of a Swedish youth organisation, and also students from several other European countries. Plans are being drawn up for extending the railway from Sarajevo to the Adriatic Sea, to a new port to be built in the Gulf of Kotor.

Post-War Mechanical Problems in U.S.A.*

Mr. F. K. Mitchell, General Superintendent, Motive Power & Rolling Stock, New York Central System, on material, equipment, and manpower needs

THE post-war battle began with 1946 and the first round is now over; 1946 was the heaviest peacetime traffic period since 1926. Passenger traffic was 50 per cent. greater and freight traffic was 33½ per cent. greater in 1946 than in 1926—this with 33½ per cent. fewer locomotives, 25 per cent. fewer freight cars, and 25 per cent. fewer employees. The net ton-miles produced per freight car per day went up from 659 to 944 and the net ton-miles per average freight-train hour on the road went up from 9,201 to 17,176. On the other hand, the price of materials went up 50 per cent. and wages went up 85 per cent., leaving a 10 per cent. decrease in freight revenues and a 33½ per cent. decrease in passenger revenues.

Railway equipment had a lot taken out of it during the war which we expected to put back when the war ended, but we have not been able to do so. Parts which were made of inferior materials and by inferior methods were still in service and causing trouble. Even the locomotive fuel was far below the average grade that good performance requires. Such things compounded our difficulties and our expenses. During 1946 the railways suffered also from the troubles of other industries. Material shortages and strikes in the steel and mining industries not only forced nearly a 20 per cent. reduction in repair and rehabilitation programmes, but almost brought the new equipment-building programme to a standstill. Supervisors are no longer cost conscious.

Manpower Position

Manpower still was far below adequacy in numbers and quality. During the war helpers and apprentices not yet graduated to mechanics, were converted by the mere expedient of changing their rates of pay and giving them a mechanic's title. The physical requirements were lowered and the hiring age of new men raised in order to get any.

Some of these men made good employees, but the majority are not in any way comparable, when measured according to ability, efficiency, loyalty, or production, to their contemporaries—the old-time railway mechanic.

For five years the war took the young men. Five years of retirements from the top of employees and supervisory groups, and five years of non-replacement at the bottom, is a total of ten years' loss. The working span of a railway mechanic's life is between 40 and 45 years; hence there was an approximate deficit of 22 per cent. Last year did not improve the situation to any appreciable extent.

At the beginning of 1947 the railway status with regard to this problem was but slightly improved. The apprentice and supervisory groups have been built up, and to some extent every effort is being made to train and develop these men. The material situation is not much better, although there are rumblings in Washington which may produce helpful allocations of steel plates, sheets, and shapes. On the other hand, no one is doing much to help the shortage of such items as nails, nuts, bolts, rivets, pipe and pipe fittings, copper wire, motors, electrical control equipment, and lumber, without an adequate supply of which, the ability properly to maintain

and keep in service existing equipment is seriously threatened.

Traders are crying for a more adequate supply of wagons—approximately 133,000 additional are needed. During the war building programmes were stopped by "directives," and even the material then available was diverted to maintenance work. Since the war, material has been available in quantities to produce only a pitifully inadequate number of units. Wagons ordered a year ago are still not laid down and the commencement of their delivery is months away.

Motive Power Requirements

A similar situation prevails with new motive power requirements. There are outgrown enginehouses, the average stall of which houses only the head end of the latest steam power. Shops are too small and are five years behind in the replacement of worn out and inefficient machinery. Cranes are too small, drop pits too few, too slow, and inefficient. New repair facilities and shops for maintaining and servicing diesel locomotives must be constructed.

Material handling equipment is far short of a complement of skids, lift trucks, tractors, and other transport devices. Passenger-car yards are too small, their facility buildings and shops are old, dark, and incapable of housing machines and equipment necessary to good maintenance of modern passenger cars with air conditioning, communication systems, intricate air-brake equipment, and delicately trimmed interiors.

Freight repair yards are adorned with a myriad of dilapidated so-called service buildings—for the most part old car bodies now only fit for termite food—and runways and crosswalks over which material must be transported and employees must walk too often, either are badly maintained plank or just plain mud. Power plants contain boilers, generating equipment, and air compressors which, but for the war, would have been replaced with modern, efficient units.

An adequate supply of materials will require selling to Congress, the producers, and the public the idea that only by giving their transport systems the opportunity to acquire the necessary material to build equipment, roadways, and needed structures, and maintain them to the necessary high standards can they expect to get business back on its feet. The brunt of that job will have to be carried by the executives, legal, and publicity departments.

An efficient material-handling system entails concrete runways, crosswalks, storage facilities, skids, lift trucks, tractors, monorails, cranes, and any other devices which speed up getting material to and from the job, cut out handling or re-handling, conserve the manpower we do have, and cut costs. With skids and lift trucks many manual operations will be eliminated. Lift truck and tractor operation are completely effective only with such adjuncts as solid runways, ramps, and an adequate supply of well-constructed skids. The mechanisation of these jobs, by speeding up the movement of the parts to the shops for repair and return, cuts down their out-of-service time and minimises the numbers of spare parts necessary—a definite conservation of material.

Another example at the shops is found in the spring-building and repair plant. Efficiency and labour saving here must

combine not only transports but layout. A plant which is laid out to move the material through in one direction from the dismantling position to the testing machine, and then into skids for movement to point of application easily, will reduce spare part requirements by 10 per cent. and man-hours and costs 25 per cent.

A well-designed flue repair shop will eliminate entirely all manual handling and testing, speed up production, and make several men available for other essential jobs. At an engine terminal the handling of driving wheels is always a problem. Drop tables which permit the dropping of from one to four pairs of driving wheels simultaneously are available. Such a piece of equipment in combination with a 10-ton monorail hoist for moving wheels to the machine shop, or on a truck or car, will cut the handling time and man-hours, and at the same time increase production and reduce materially the out-of-service time of driving-wheel assemblies and expensive motive-power units.

At the freight-wagon repair yards, the movement of material to the repair locations for application and scrap back to wagons for shipment is always a problem. Here concrete runways, skids, tractors, and trucks are invaluable in reducing costs and increasing production; that is, in producing more serviceable wagons and making more men available for other essential jobs. The same thing can similarly be accomplished in coach yards.

We need modern, efficient machinery and tools to replace those we have been struggling along with or have done without entirely. That programme got a terrific setback during the war, but now it can and should be accelerated. Nothing contributes more to the railways' efficiency and reduces cost more. At the shops the cost reduction is immediately evident, but it is even more productive in the reduction of maintenance time and expense after units repaired in the shops are in service.

The drop table at the engine-house, a boring mill specially designed for driving-box work, a milling machine equipped to contour rods automatically, a hydraulic car-wheel borer, a modern flanging press, a car washer—these and numerous other modern machines will all pay for themselves in a surprisingly short time, and during that time turn out more and better work while making man-hours available for other essential jobs.

Better Care of Employees

Too often in the past we have given employees only the things they forced us to provide. There are, however, certain things which they have a right to have and which we will actually save money by providing—such things as well heated and lighted shops; engine-houses with stalls long enough so that the doors can be closed in the winter, and with adequate light for inspection and repair work on dark days and at night; sanitary toilet facilities; modern washrooms; satisfactory locker and lunch rooms; the best seats we can put in our locomotives for the crews; a little leg room for the engineman and fireman; a means of getting a sanitary drink of palatable water; office space for passenger conductors; comfortable cushions for the bunks in caboose cars, and a good grade of fuel for locomotives.

Every one of these things will pay good returns in the way of better performance and increased efficiency, and cut down absenteeism, and perhaps, through satisfying a large portion of our employees, we can expect to boost individual employee's

* Abstract of an address before the New England Railroad Club, Boston, Mass., on April 8, by Mr. F. K. Mitchell, General Superintendent, Motive Power & Rolling Stock, New York Central System

productivity from its present approximately 70 per cent. to nearly 90 per cent.

We must provide an ample reservoir of efficient, well-trained, cost-conscious, loyal employees. This we must do through apprentice and supervisory educational programme. The "old-time mechanic" even at best was not the mechanic we now need, except in respect to his loyalty and devotion to duty. He knew his stuff, but the jobs he was faced with were child's play compared to the ones which his successor must know how to do.

New Mechanics

The new mechanic is going to have to be proficient in building, repairing, and maintaining all of these new complicated devices so rapidly becoming standard. He must be capable of assimilating instruction and learning how to take care of even more complicated devices which are sure to be with us soon.

Where are these new mechanical wonders going to come from? We are going to make them out of the men we now have and from the ones we are going to hire as apprentices. Neither job is impossible, but both will involve a great deal of planning and hard work.

First, we must train the trainers. Fundamentally these new-day, post-war mechanics we are going to make can't be any better than the men from whom they get their training, inspiration, and incentive to do better work. Their trainers are going to be supervisors and apprentice instructors made from the higher type of men now in service. If we do this properly there won't be any question about qualified successors for them when they are promoted, or for other reasons are no longer with us, for the graduate apprentice will be able easily to fill their places. If we inspire these trainers with loyalty, honesty, enthusiasm for their company and their work, and the desire to bring along the apprentices on these same lines, giving them the best instruction and advice available, gradually as these apprentices become mechanics, inefficiency, disinterest, and absenteeism will fade out, and as it does costs will go down, and equipment maintenance and operation will improve.

The first move must be to decide how many of these apprentices each of us is

going to need to fill the gap. This will include in the total the loss during the past five years, and a sufficient number to fill the current losses due to mortality, resignation, retirement, and promotion. Not too many—we must have a place for each graduate if we expect to hold the interest and the enthusiasm of those we are training.

Then we must go out after the boys we need, not wait for them to come to us. In the first place, if we pursue the waiting course, we will get what other industries do not want—a low average of intelligence, enthusiasm, and adaptability to our needs. These boys we must have are not the run-of-mine kind. They will have to be above the average in all respects. We are expecting to develop them, not just into ordinary mechanics but into engineering mechanics.

These same boys are going to have to be the ones to pick up a thorough working knowledge of the many new devices which will come into use during their lifetimes—electronics, the gas turbine, jet propulsion, and perhaps even the atomic engine.

We have neither the time nor the need to be teaching apprentice boys the three R's, spelling, or even blueprint reading. They must have had those things before we get them. We must go out and select them from high schools, trade schools, colleges, and universities. We must sell to the leaders of those schools the fact that we have a worthy, well-compensated vocation to offer their students, and enlist them on our procurement staff, which by the way should include our shot-craft committees and every supervisor in the mechanical department.

After hiring, the next important task is inspiring. Without inspiration even the best candidate can be ruined. Take time to talk matters over with him. Show him what his future has to offer—point out the successful men who have come up over the route he is starting on. Let him understand from the start that there is no place in the organisation for the drone, the misfit or the disloyal. Let him know that there is no limit to the advancement open to him, except the limitation he places on himself by his own failure to take advantage of the training he is about to be given.

His training in the apprentice school should be thorough and as rapid as he is able to absorb it. Do not hold him back for the average man in the class. If he grasps his assignments easily and thoroughly, use him as an assistant instructor. Experience thus gained will help him, and the company may find a natural supervisor of men at this early stage. In this and other ways, reward those who merit reward, and inspire not only them, but the other fellow who sees that rewarding. Keep the curricula up to date. Constantly revise lessons and examples to incorporate each new development in the art. Give apprentices a chance to broaden their experience and training whenever possible. If the air-brake or diesel-instruction car is in town, encourage them to spend all the time they can in learning everything the air or diesel instructors can offer them.

Plan the shop work for apprentices so that each will get an appropriate time on every important phase of his craft's work. See that nothing interferes with this.

Whenever possible, give the apprentices of one craft a chance to find out about the more important operations carried out by the other crafts.

Outside Training

Outside class or shop, encourage apprentice clubs, trips to power plants and other industries' shops, where this can be arranged; home study, and the use of available text books in the company libraries create incentives and establish rewards. Give these awards on some definite, well established basis to avoid any possible stigma of favouritism. Let the value of the award parallel the value of the accomplishment.

I am convinced that the top award should be a scholarship to some accredited engineering school for the apprentice or apprentices who top their group in achievement during the four years of their course. This award is even more appropriate since we are endeavouring to make "engineering mechanics" and "engineering supervisors."

When such a training programme begins to infiltrate into our ranks the type of employee our future demands, in quantities adequate for our needs, the effect will be like a blood transfusion.

THE A.B.C. INTERNATIONAL AIR & SHIPPING GUIDE.—This companion volume to the *A.B.C. Railway Guide* has increased its price to 3s. (annual subscription £2) beginning with the Mid-June issue, in view of the rapidly increasing size which has been necessitated by the growth of commercial aviation.

CZECHOSLOVAKIA TRAVEL DISCUSSIONS.—At the invitation of the Ministry of Foreign Trade, Mr. J. G. Bridges, Director-General of the British Travel Association, and Mr. E. W. Wimple, of the Workers Travel Association, recently visited Czechoslovakia to discuss two-way travel between that country and Great Britain. Mr. Bridges and Mr. Wimple represented the United Kingdom at the recent International Conference of National Tourist Organisations.

"INDUSTRIAL WALES" EXHIBITION.—In our May 2 issue we referred to the "Industrial Wales" Exhibition which is to be held in the Empire Hall, Olympia, London, from August 28 to September 13 this year, and which is being sponsored and organised by the Industrial Association of Wales & Monmouthshire, 3, Castle Street, Cardiff.

Recent reports indicate that the great development in the variety of output of Welsh industries in recent years has captured the interest of overseas traders. Special supplies of printed information, therefore, are being sent abroad in response to many requests for full details of the exhibition. More than 100 important industrial concerns have their exhibits well advanced, although other plans have had to be deferred pending a re-allocation of space for certain sections, principally the lighter industries. Ground floor space, reserved for exhibits of a heavy character, was fully booked many weeks ago.

NEW STEAMSHIP INCREASES G.W.R. IRISH SERVICE.—The ss. *St. David*, the latest addition to the G.W.R. fleet, will be brought into service on the Fishguard-Rosslare route on July 25. This will enable the existing service on three days a week to be augmented to five days a week in each direction, to cater for the heavy holiday traffic to Southern Ireland. Between July 26 and August 30, the service to Ireland will be each weekday, except Tuesdays; and between July 28 and September 1 there will be sailings from Ireland every weekday, except Wednesdays. The departures

times of trains and boats will remain as at present. The *St. David*, launched on February 6 last, is a 3,000-ton oil-fired vessel, with accommodation for 1,300 passengers and 350 tons of freight; there are sleeping quarters for 400 in single, double or open berths and luxury cabins. Modern aids to navigation have been incorporated, including radar and an echo-sounder. The ample accommodation already available for motorcars via Fishguard will be increased considerably by the *St. David*, which can carry up to 50 cars.

L.M.S.R. EXTENSION OF TIME APPLICATION.—The London Midland & Scottish Railway Company is applying to the Minister of Transport for an Order to extend by three years in the case of certain works, and by two years in the case of the purchase of certain lands, from October 1, 1948, the time at present limited. A copy of the draft application may be inspected at the office of the Chief Solicitor, London Midland & Scottish Railway, Euston Station, N.W.1, from whom copies may be obtained, price 6d, each, and to whom any representations against the application must be submitted not later than July 23, 1947.

International Railway Congress

Conclusions reached on the questions discussed at the 14th session of the congress in Lucerne

AT the business meetings of the International Railway Congress Association in Lucerne on June 25 and 26, delegates discussed the reports presented to the five sections which were summarised in our June 13 issue. The sections were concerned with the following subjects:—

- Section 1—Way and works
- Section 2—Locomotives and rolling stock
- Section 3—Working
- Section 4—General
- Section 5—Locomotives and rolling stock of light railways and Colonial railways

Sections 2 and 5 held their meetings jointly. A full list of the questions dealt with, and of the reporters, was published in our April 25 issue. The conclusions are summarised below.

QUESTION 1—SLEEPERS

Of the various types of sleepers, the wood sleeper is still far and away the most widely used. Soft and resinous woods are used as well as hardwoods, the choice of timber varying according to the resources of the country and economic circumstances.

After natural or artificial seasoning, it is desirable to impregnate wood sleepers by means of some antiseptic product, which prevents rot and appreciably lengthens their life. The most widely used and most effective product is tar oil or creosote. It would be interesting to study more deeply substitute products for creosote. Impregnation preferably should take place in the railway shops at the same time as the sleepers are adzed and bored.

Methods of Fastening

The method used to fasten the rail to wood sleepers plays an important part in the conservation of sleepers. Mechanical wear of the sleeper, together with rot, is, in fact, the main cause of deterioration. On many railways, flat-bottom rails are laid directly on the sleepers and secured by means of spikes or coach screws with good results; for lines with heavy traffic, or where there are small-radius curves, the use of soleplates with direct fastenings, or, better still, indirect fastenings, is likely to prolong the life of sleepers appreciably. Chairs have to be used with bull-head rails. The placing of pads made of special wood, or, preferably, rubber, has produced interesting results on some systems.

From the point of view of strength and life, metal sleepers can replace wooden sleepers, except, of course, where track circuiting is involved. They are preferable in tropical countries where wood perishes very quickly. It would seem preferable to fasten the rails by means of soleplates or chairs welded to the sleepers, rather than to make use of direct fastenings with clips or spikes and bolts.

Concrete sleepers are not yet used widely, though certain types made of ordinary reinforced concrete have given quite good results; present research would seem to be concentrating on pre-stressed concrete. The fastening of the rail to concrete sleepers is still a difficult problem.

The conservation of sleepers depends to a large extent on the maintenance of the correct level of the track. This maintenance can be carried out either by tamping, by hand or mechanically, or by measured shovel packing. The latter gives excellent results, and is being more widely used. The repair of defective fastenings

is another essential factor in prolonging the life of sleepers; such repairs usually are made in conjunction with re-adzing, re-cutting the shoulders, and repairing splits.

Owing to the present shortage of labour, the use of mechanical methods for all maintenance work is to be greatly recommended. Maintenance of metal sleepers in the track is limited to tightening up the fastenings. Repairs to cracks by welding and the replacement of the soleplates can be done only when the sleepers are taken up. The only maintenance operation possible with concrete sleepers is the replacement of the fastenings.

When its appreciably shorter life is taken into account, the soft-wood sleeper, in spite of its lower first cost, costs more per year of service than a hardwood sleeper. Although the information supplied by the different railways does not make it possible to say so definitely, it would appear that, leaving aside those countries rich in timber, the cost of impregnating the sleepers is made good by their longer life.

Life Prolonged by Metal Soleplates

The use of metal soleplates, especially with indirect fastenings, prolongs the life of wood sleepers, but the figures supplied do not make it possible to conclude that there is a definite economic advantage to be obtained thereby. The same applies to every device capable of reducing the hammering of the rail on the sleeper. In steel-producing countries, the metal sleeper may compete with the wood sleeper from the point of view of annual cost.

It is not yet possible to give any definite opinion from a financial point of view concerning concrete sleepers, the price of manufacture of which is high. If they can be given a sufficiently long life by careful manufacture and a suitable method of fastening, their annual cost may become lower than that of wood or metal sleepers.

QUESTION 2—LIGHTWEIGHT ROLLING STOCK

There is a general tendency towards reducing the weight of all-steel passenger stock without adversely affecting strength or comfort. Whatever the quality of steel used, it has been possible to reduce, by a large proportion, the weight of passenger stock by careful design of all parts and by the use of sections made of thin sheets welded together.

Usually the underframe-body structure is of the tubular girder type, which has a high moment of inertia and the ends of which are specially braced and reinforced to resist shock. Static and dynamic tests of the structure are considered desirable. The use of strain gauges for such tests is most suitable.

Ordinary carbon steel is still most generally used for building passenger stock. However, the use for that purpose of weldable low-alloy steel, with a high elastic limit, as well as the use of rustless steel, is becoming more common.

Light alloys can be used widely for many detail sections, and for interior fittings. They are used also in the building of structure assemblies of passenger stock for some light railways, but on main-line railways their use for that purpose does not seem likely to be developed.

The lightening of bogies can be obtained to some extent by using welded or riveted thin plates for underframe construction, and by replacing laminated springs by helical springs, or the use of torsion bars controlled by shock absorbers. It is interesting to mention also the combined use of rubber and steel for main suspension, and the use of rubber-suspended wheels. Designs at present in use allow for increase in comfort, and it would be possible further to reduce the weight of vehicles by replacing the heavy bogies in present-day use.

Lightweight rolling stock has been in service too short a time, and in too small numbers, to permit definite conclusions as to its advantages from the points of view of economy and savings in wear on the track, but certain advantages are becoming apparent.

Weight Reduction in Wagons

Railway administrations are endeavouring to reduce the weight of their goods wagons as much as possible. The reduction is achieved in general by the use of welded construction of the underframe members and bodies, and also by the partial use of pressings, which permits reduction in thickness whilst maintaining sufficient rigidity.

Ordinary steels are employed normally for goods wagons, but light alloys are used sometimes for certain details. Experiments are being carried out with light alloys for the principal framing.

The possible saving in weight for goods wagons is low in comparison with that for passenger stock. Reduction in weight should not be developed beyond a point where it ceases to be a commercial proposition.

QUESTION 3—PASSENGER SERVICES AND FARES

Passenger fares should be readjusted in order to approach, as near as is judged possible, a level which would permit an equilibrium of passenger traffic expenditure. If passenger fares were too low, railway administrations, having the balancing of their budget in mind, would be forced either to deprive the public of indispensable facilities, or to increase goods rates, which would render them particularly vulnerable to road competition.

To avoid the inflation of train-mileage, the latter should be fixed at a level exactly adapted to the necessities of a rational service giving satisfaction to the public. On main lines, in principle, "speed at all costs" should be given up, sufficient day and night services being maintained between large centres. However, on lines where a potential development of traffic exists, a few high-speed trains, offering special comfort, should be operated in order to facilitate and encourage travel. Electrification of such routes appears an interesting possibility, electric traction being a means of obtaining economically a frequent and speedy service likely to promote an increase of traffic.

Serving Intermediate Stations

Long-distance slow trains are costly on account of their poor utilisation on the greater part of the route. They can be replaced by short-distance trains, the composition of which can be adjusted more exactly to potential traffic. Timings of such trains can be adapted better to the needs of the public, and their higher commercial speed will permit easy operation of lines with fast and frequent services.

The fast and slow trains can be replaced usefully on main lines by powerful railcars. In order to cope with fluctuations

of traffic, these railcars should be able to be coupled, and have a reserve of power sufficient to haul an extra vehicle without excessive repercussions on the timetable.

Service on secondary lines can be covered by a shuttle service of railcars, which should be able to be coupled and have sufficient power to haul one or two trailers. A steam train shuttle service could be provided eventually for transport outside the capacity of the railcars.

Service on suburban lines could be provided by sets of regular-interval trains, each train being allocated to serving particular stations or a definite area. Suburban lines should be electrified in order to develop and accelerate the service with a view to increasing patronage.

There are great possibilities in running through coaches, especially for night travel, on the more frequented lines, in order to avoid detraining passengers at inconvenient hours. It is also necessary to develop sleeping berths of all kinds in order to combat competition.

The weight of rolling stock should be reduced in order to cut haulage and maintenance costs, and to make possible an increase either of speed or capacity of passenger trains. Whereas before 1940 the average weight of steel vehicles on European main lines increased to over 40 tons, the construction should be undertaken of passenger vehicles lightened to the maximum degree compatible with maintaining the standards of safety and comfort existing at present.

Peak Traffic Problems

The traffic peaks which occur at certain periods bear heavily on the running costs of passenger trains, as the rolling stock required to cope with additional services remains unemployed during the great part of the year. It is desirable to reduce such peaks by methods such as the following:—

(1) Reduction or cancellation at holiday times of fare concessions granted to certain categories of passengers.

(2) The ultimate introduction of a positive fares policy inducing passengers to arrange their journeys outside holiday periods.

(3) The limitation of the number of seats having to be offered by making advance booking compulsory on certain trains.

(4) A more intensive utilisation in normal traffic of the rolling stock required.

(5) By organising maintenance and repairs so as to minimise the number of coaches in shops at peak periods.

(6) By taking steps with the appropriate authorities to obtain a better staggering of holiday departure dates.

In order to organise the transport of passengers, administrations are recommended to proceed with the study of running costs of trains and railcars by category, routes, and motive power. This will enable a general passenger traffic balance sheet to be drawn up.

It emerges from the above conclusions that the idea of "speed for the sake of speed" should be abandoned, and that the search for traffic at any cost is a fallacy. In order to pursue this new tendency, administrations will have to show great tenacity in resisting undue demands from the public, and obtain support for their actions from the public authorities and official organisations.

QUESTION 4—HOUSING FOR STAFF

The question of housing railway staff is a social problem of primary importance from the national point of view, as well as a railway working problem.

All administrations agree that it is most desirable to have employees housed comfortably and with certainty of tenure, from the point of view of the efficiency,

regularity, and flexibility of the service; but they do not all consider it necessary for all members of the staff to be housed by the railway. This is considered essential only on certain colonial railways and three other railways.

In carrying out the principles laid down in the foregoing conclusions, administrations should endeavour to place accommodation, when there are no reasons for not doing so, at the disposal of employees whose permanent presence where they work is essential in the interests of the service; and of those whose presence where they work, although not essential, is none the less convenient.

In order to ensure adequate standards of comfort and living conditions, it is desirable that administrations, as well as Governments, or both together, should help employees to buy their own homes by means of a system of financing building societies and staff co-operatives, making direct or indirect loans to employees at the lowest possible rate of interest.

Concessions for House Purchase

In countries where it would be possible within the framework of existing legislation or custom so to arrange, further concessions might be made in the way of exemptions from, or reductions in, rates and taxes; by supplying building sites free or at low cost by requisitioning or long-term leases; together with transport facilities, supplying materials, and technical supervision of the work.

Owing to the shortage of houses in nearly every country, it is desirable for administrations affected to draw up building and reconstruction programmes so as to supply hygienic accommodation for railway employees in the future to the extent necessitated by service requirements; and to meet the economic needs of employees and their social obligations. Such programmes should be carried out in as short a time as possible, governed by the availability of materials, labour, and finance.

Side by side with the building programme, it is desirable for railway administrations to speed up the reconstruction of damaged houses, and to improve or convert old houses by building on the additional rooms, together with bathrooms, main water and electricity, drains, and other services, so as to provide railway staff and their families with hygienic and comfortable conditions at up-to-date standards.

In view of the social and material importance to the railways of obtaining a sufficient number of satisfactory homes for their staff, it is desirable for administrations to set up a special department for dealing with building, upkeep, management, and allocation of staff accommodation, working as far as possible in consultation with staff representatives.

FINAL PLENARY MEETINGS

Plenary meetings of all delegates to the congress were held on June 27 and 28. The conclusions of the four sections (summarised above) were adopted at the meeting on June 27, and the session concluded with a speech of thanks by the President, Dr. W. Meile, to all who had co-operated in transacting the business of the congress.

Various questions of organisation were dealt with at the final meeting on June 28. Switzerland was given two additional seats on the Permanent Commission of the congress, which will be filled by Sr. C. Lucchini, Regional Manager, No. 2 Region, Swiss Federal Railways (Lucerne); and by Monsieur F. Steiner, Deputy-Director of the Swiss Federal Transport Office.

Dr. W. Meile, President of the General

Management, Swiss Federal Railways, and a member of the Permanent Commission of the congress, was appointed a life member of the commission. Dr. Meile had acted as chairman of the Lucerne congress.

It was announced that the tenure of office of members of the intermediate meetings of the Permanent Commission would be four years, and that additional members might be co-opted. The next meeting of the Permanent Commission is to be held at Lisbon in 1949; the location of the next congress has not been decided so far.

In his concluding speech, Dr. Meile pointed to the very promising results of the technical discussions at the congress, which would be of great significance for railways and railwaymen. He expressed his warmest thanks to the organisers of the congress, and to the general secretaries, M. Ghilain and M. Dreyer. Dr. Meile said in conclusion that communications always would contribute a link in the progress towards world peace.

Monsieur F. H. Delory, General Manager of the Belgian National Railways and President of the Permanent Commission of the International Railway Congress, expressed his thanks to Dr. Meile in the name of all participants in the congress. He also thanked the city of Lucerne for its reception of the delegates, and said that they all would retain imperishable memories of their stay there and of the parts of Switzerland which they would have the opportunity of visiting.

Dr. Meile then declared the congress closed.

BRITISH STANDARD SPECIFICATION FOR WROUGHT STEELS.—A revision of B.S. 970 for wrought steels has been published. This schedule of steels (called the En. Series) was first prepared as a war emergency specification to provide a co-ordinated and comprehensive series of steels for general engineering purposes, but its continuation has since been requested by users generally. Copies may be obtained from the British Standards Institution, 28, Victoria Street, London, S.W.1, price 10s. 6d. each, post free.

PROPOSED COLLECTION OF L.N.E.R. MODELS.—In order that the characteristics of L.N.E.R. locomotives and rolling stock, and of the equipment of its constituent companies, may be placed on record, the formation has been proposed of a permanent collection of models. Such a collection would belong in the first instance to the L.N.E.R., and subsequently would be available to its successor, possibly forming the nucleus of a museum illustrating British railway practice in general. The suggestion is that models should be of "0" gauge (7 mm. scale), and electrically driven. Suitable models, with adequate external detail, would be purchased, or if necessary accepted on loan, and owners of such models are invited to communicate with Mr. George Dow, Press Relations Officer, L.N.E.R., sending in the first instance details and photographs when available. Although it is intended that the models should be electrically-driven, so as to be used in demonstration layouts at exhibitions and elsewhere, it is emphasised that workmanship and accuracy will be the first considerations in making a choice, as it would be an easy matter to fit mechanism later, or convert existing electric models to the voltage and system of collection standardised. Rolling stock as well as locomotives are required, and of both pre-grouping and post-grouping prototypes.

International Railway Congress at Lucerne



Joint meeting of sections 2 and 5 (lightweight rolling stock)



Section 4 in session (railway housing policy)



A section meeting in progress



Delegates at a section meeting

Hans-Blattler

Photos.]

International Railway Congress at Lucerne



The Swiss centenary train about to leave on one of the excursions which have been operated from various centres to commemorate the opening of the Zurich-Baden Railway 100 years ago



Interior of the Festhalle at Lucerne as decorated for the dinner given by the Swiss Federal Railways to delegates to the International Railway Congress

Photos.]

[Hans-Blattler

Heavy Shunting Tank Engines for G.W.R.

Use of standard taper boiler in new 0-6-0 type with increased fuel capacity

THE first ten engines of a new 0-6-0 shunting type have just been completed at Swindon Works, G.W.R. They are intended for heavy shunting duties or stopping passenger work as required, and will be known as the "9400" class.

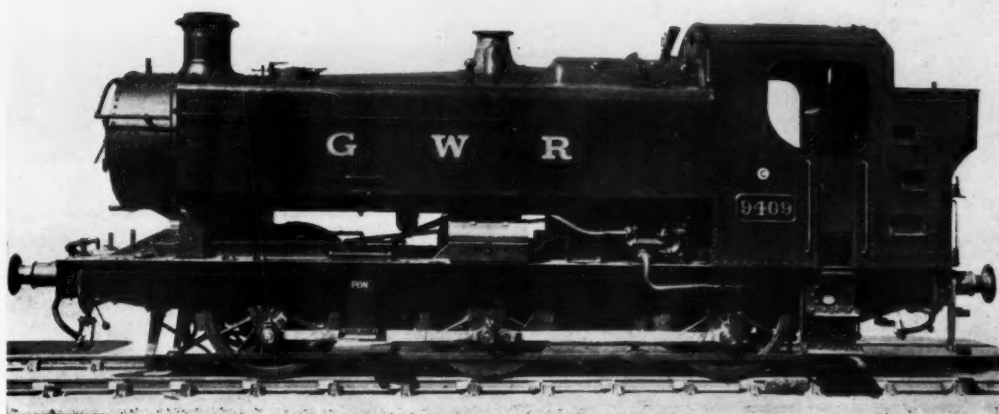
The new engines are in the main a modification of the G.W.R. "8750" class, but the frames have been redesigned to take the G.W.R. standard "10" boiler in place of the "2301" class boiler with parallel barrel. The coned barrel and single-row superheater contribute towards an increased steaming capacity, while an increase of heating surface and firegrate

welded pannier tanks are the largest fitted to 0-6-0 tank engines on the G.W.R., and compare with the 1,200-gal. capacity of the "8750" class. The tank fillers and air vents are set in towards the boiler, on pockets welded to the tanks, to give an unobstructed view from the cab front windows. In order to obtain the extra water capacity, the width over the tanks has been fixed at 8 ft. 6 in., while the overall width of cab and bunker has been brought to the same figure, producing the widest cab yet fitted to G.W.R. 0-6-0 tank engines. The width over the footplate also has been fixed at 8 ft. 6 in. to

springs of the new engine carry compression hangers. The engine is reported to have excellent riding characteristics. Some leading dimensions are tabulated below:—

Cylinders (2) ...	17½ in. x 24 in.
Coupled wheels, dia. ...	4 ft. 7½ in.
Boiler barrel ...	10 ft. 3 in.
Dia., outside ...	4 ft. 5½ in. and 5 ft. 0½ in.
Heating surface—	
Fire tubes ...	1,069 sq. ft.
Firebox ...	102 sq. ft.
	1,171 sq. ft.
Superheater ...	74 sq. ft.
Total ...	1,245 sq. ft.
Grate area ...	17.4 sq. ft.
Tractive effort ...	22,515 lb.
Water capacity ...	1,300 gal.
Coal ...	3 tons 10 cwt.

The new engine is equipped with the G.W.R. automatic train control apparatus, the shoe being of the unsprung type



The new G.W.R. pannier tank heavy shunting locomotive

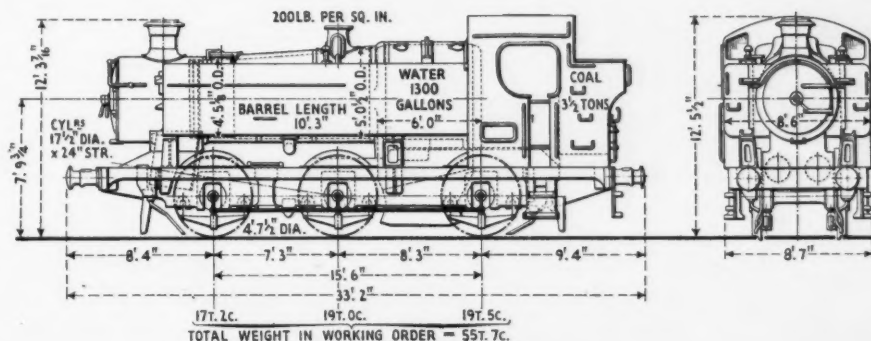


Diagram showing principal weights and dimensions

area is effected, the figures for the standard "10" boiler being 1,245 sq. ft. and 17.4 sq. ft. respectively, as compared with 1,115.3 sq. ft. and 15.3 sq. ft. respectively for the "2301" class boiler. The working pressure remains the same at 200 lb. per sq. in.

In the new engines the smokebox is of the drum-head type, and is carried on a saddle cast integral with the cylinders. A jumper top is fitted to the blast pipe. The cylinder casting is identical with that of the "2251" class engines, and the motion is the same as that of the "2251," "5700," and "8750" classes, an important feature in the interests of standardisation.

With a capacity of 1,300 gal., the all-

keep within the loading gauge, and therefore no footplate exists at the sides of the cab and bunker. Steps have been slung from the left side of the rear buffer beam to allow enginemen to reach the rear of the bunker.

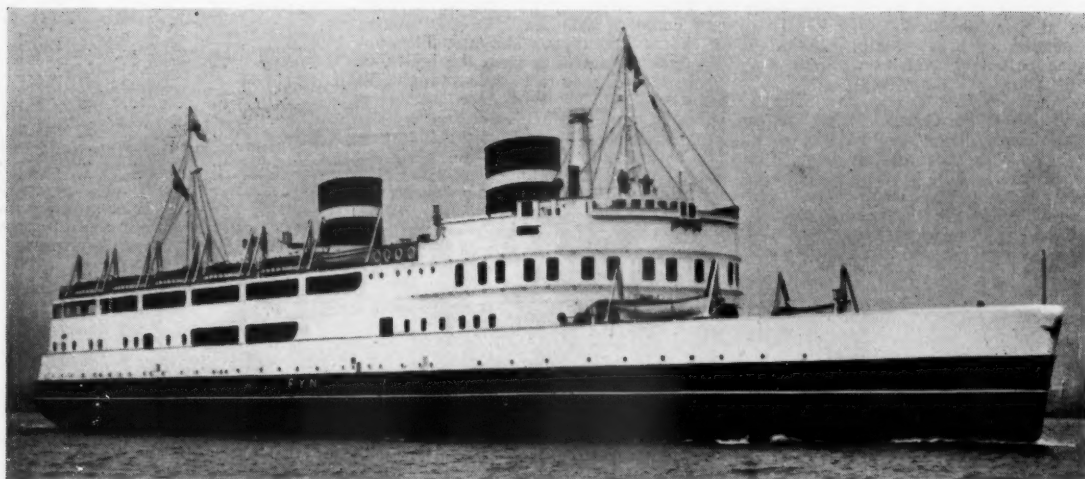
The coal bunker also is of larger capacity than in any other G.W.R. engines of the same class, taking 3 tons 10 cwt. of coal and yet giving a good look-out for the crew when running bunker first. The footsteps on the left hand side of the bunker are built into the side to ensure clearance of the loading gauge.

The opportunity has been taken of replacing the nest of coil springs, as fitted to the trailing axleboxes of the "8750" class, by underhung laminated springs; all

carried on the leading axleboxes. A satisfactory ratio of empty to full weights—44 tons 3 cwt. as against 55 tons 7 cwt.—has been achieved, a slight improvement on previous G.W.R. 0-6-0 tank engines.

The general appearance of the locomotive is pleasing, the line of the characteristic G.W.R. taper boiler showing up well above the tops of the tanks. Also, the boiler being fairly high in the frames, a considerable space is left between the bottom of the boiler and the top of the frames, an advantageous feature so far as the inspection, maintenance, and lubrication of the motion is concerned. The locomotive is 33 ft. 2 in. in length over the buffers, as compared with 31 ft. 2 in. for the "8750" class.

New Danish State Railways Ferry



mv. "Fyn," the new train ferry for the Nyborg-Korsör crossing



General class smoking room



General class dining room

New Danish State Railways Ferry

Train ferry with hinged bow for Great Belt crossing



First class smoking saloon

THE Danish State Railways have received a new train ferry from Burmeister & Wain Limited, of Copenhagen; the ferry, which is named *Fyn*, went into regular service on April 19. For the Great Belt crossing between Nyborg and Korsør the Danish State Railways now have five large diesel-engine train-ferries, each of which has three tracks on the deck. The last two are the more powerful, though, as they are running with the other three, their extra power is at present used only in making up lost time; however, it is also of importance during winter, as these two ferries are so constructed as to force their way through ice. Also on the Great Belt crossing are two motorcar ferries, and an older steam ferry which has only two tracks on deck is kept as reserve.

During the autumn of 1944, the German army seized three of the Danish State Rail-

ways' Great Belt ferries, and as it was feared that more would be either seized or damaged through warfare, it was decided to order a new ferry at once. The first intention was to have the hull built in Sweden and the engines and interior fittings in Denmark, but this proved to be very difficult, and it finally was decided to buy about 1,000 tons of steel from Sweden, and let Burmeister & Wain Limited build both the hull and the engines. The ferry was ready in March, though ice conditions prevented the trials being carried out then.

The ferry is designed to carry 1,500 passengers, together with the full load of railway vehicles and motorcars. Three diesel-engine trains, each composed of three or four cars and weighing respectively 152 and 196 tons, or, instead, 30 two-axle railcars or 85 motorcars, can be conveyed. The three tracks, which are on the main deck,

have a total useful length of 283½ yd. The main deck is very spacious, and to keep it unencumbered the stairs have been built well in at the sides. This also leaves room for motorcars, on account of which the rails are depressed, and the tops are flush with the wood deck. The vehicles are



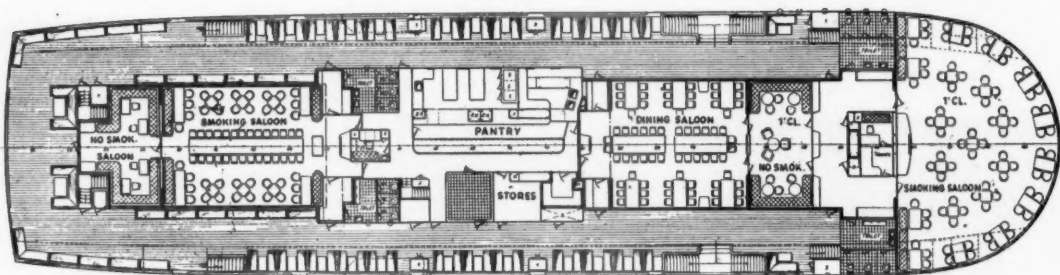
Hinged bow in raised position

secured by shackles and ring plates which also, as far as possible, are flush with the deck.

Transfer of rail vehicles from ship to shore is facilitated by a hinged bow, illustrated in this article. When the ferry is at sea, these bows give it the appearance of an ordinary vessel, and also give greater protection for the vehicles from spray. The stem is made of cast steel in very solid construction, and is designed for ice-breaking; there is rudder and steering engine at both ends. Steering at night and during foggy weather is assisted by



The main deck, showing three rail tracks



Layout of main public rooms on promenade deck

echo sounding; there is also a radar installation.

Passengers generally, and especially in good weather, use the promenade deck, in the front part of which is the first class smoking saloon, with an adjacent pantry and hall. There is indirect lighting in the smoking saloon, and the panelling is finished in dark ash-wood, and the furniture is of hazel; in the first class non-smoking saloon there are kivasenge panels and elm furniture. Behind these rooms is the dining saloon, which is for both first and general class passengers; it is finished in bright ash, and the furniture is mahogany. There is also a pantry, and aft are the general class saloons, smoking and non-smoking, which are panelled and have furniture of elm.

There are further saloons for the passengers on the 'tween deck; these include first class ladies' and gentlemen's saloons in front of the engine room, and general

class saloons, with pantry. Floors in the saloons, halls, and officers' rooms are of Ruboleum.

The ferry has a loud-speaker system in all rooms and on the promenade deck, so that messages immediately can be given to passengers. There is also a local telephone exchange, so making it possible to speak from one room to another; these telephones also can be put in connection with the ferry's wireless office, so that it is at all times possible to get in direct connection with any telephone number in the country.

The machinery consists of two Burmeister & Wain 6-cylinder 2-stroke diesel engines, each of which is directly coupled to a propeller shaft. The total horsepower is 5,450, which at 165 rev. per min. gives the ferry a speed of 16½ knots when fully loaded. As auxiliary engines there are four 3-cylinder Frichs diesel engines, each developing 385 h.p. These auxiliary

engines deliver the current for the electric steering machinery, pumps, capstans, wireless, lighting, and ventilating.

ROAD ACCIDENTS IN MAY, 1947.—The return issued by the Ministry of Transport of the number of persons reported to have died, or to have been injured, as a result of road accidents in Great Britain during the month of May last, shows 398 deaths (compared with 405 in May, 1946), 3,383 seriously injured (compared with 2,886 in May, 1946), and 11,656 slightly injured (compared with 9,645). The total of 398 killed represents the lowest number of fatal accidents for any May during the 17 years for which monthly official records have been kept; but the number of injured is 2,508 more than in the corresponding month last year, and is the highest total for May since the year 1941.

Santa Fe Diesels at Barstow Maintenance Shop



Locomotives at the diesel maintenance shop of the Atchison, Topeka and Santa Fe Railway at Barstow, California, which was described in the May, 1947, issue of "Diesel Railway Traction"

RAILWAY NEWS SECTION

PERSONAL

R.C.H. SECRETARYSHIP

Mr. J. E. T. Stanbra is retiring on July 19 from the position of Secretary to the Railway Clearing House. He will be succeeded by Mr. T. J. Lynch, at present Assistant Secretary.

Mr. H. E. O. Wheeler (who retired in 1945 from the position of Deputy Traffic Manager, Southern Railway) is returning to England on the conclusion of his inquiry, to which reference was made in our March 7 issue, into the general working of the Newfoundland Government Railway.

We regret to record the death on July 1, at the age of 78, of Sir Hardman Lever, Bt., K.C.B., who was a Director of the Dunlop Rubber Co. Ltd.

Mr. J. R. Bailey, M.B.E., Assistant Portmaster at Grimsby & Immingham, L.N.E.R., retired on June 30, after more than 46 years service with the Great Central Railway and L.N.E.R.

COLONIAL RAILWAY APPOINTMENTS

Mr. J. W. Duggan to be Assistant Chief Mechanical Engineer, Nigerian Railway.

Mr. Charles MacArthur to be Works Manager, Nigerian Railway.

Mr. Robert Caverhill to be District Traffic Superintendent, Nigerian Railway.

Mr. H. F. P. Plumridge to be Staff Manager, Nigerian Railway.

Mr. A. Ramsey Moon is resigning as Director of the British Welding Research Association from August 31 next. Mr. Moon has been largely responsible for the development of the Association, in his present post, and, formerly, as Secretary of the Institute of Welding and Director of Research under the Welding Research Council.

INSTITUTE OF TRANSPORT

The undernamed have been elected Ordinary Members of Council of the Institute of Transport to fill the vacancies which will arise at October 1, 1947:—Members: Messrs. D. Blee (Chief Goods Manager, G.W.R.), M. A. Cameron (Assistant Passenger Manager, Southern Area, L.N.E.R.), H. W. Elliott (Assistant General Manager, Hay's Wharf Cartage Co. Ltd.), P. M. Hill (General Manager, Chamber of Shipping of the United Kingdom), G. Morton (Chief Accountant, L.M.S.R.), A. B. MacLeod (Stores Superintendent, Southern Railway), H. Shankland (Local Director, National Sales, Dunlop Rubber Co. Ltd.), D. M. Sinclair (General Manager, Birmingham & Midland Motor Omnibus Co. Ltd.), J. O. Wood (Chairman & Managing Director, T. F. Wood & Co. Ltd.); Associate Member: Mr. C. F. Klapper, Assistant Editor, *Modern Transport*.

Mr. T. H. Moffat, who, as recorded in our June 27 issue, has been appointed Acting Chief Officer for Scotland, L.M.S.R., retaining his position as Secretary of the Scottish Committee of the company, received his early training in the Accountant's Department of the Caledonian Railway. He transferred to the General Manager's staff in 1912, becoming General Assistant, and later Personal Assistant, to the General Manager. In 1916 Mr. Moffat inaugurated

It is notified in the Second Supplement to *The London Gazette* dated June 27, under the heading of Regular Army Reserve of Officers, Royal Engineers, that Major (Hon. Lt.-Colonel) G. R. S. Wilson, having exceeded the age limit of liability to recall, ceases to belong to the Reserve of Officers, June 28, 1947, retaining the honorary rank of Lt.-Colonel. Colonel Wilson is an Inspecting Officer of Railways, Ministry of Transport.



Mr. T. H. Moffat

Who is appointed Acting Chief Officer for Scotland, L.M.S.R., and remains Secretary of the Scottish Committee]

and was responsible for the Financial & Statistical Section of the Caledonian Railway, and three years later he was chosen to represent the Scottish railways on the Statistical Committee of the Railway Executive Committee. During the 1914-18 war he was responsible for all questions of Government control relating to the Caledonian Railway. In 1922 Mr. Moffat became Principal Assistant to the General Manager of that railway, who, under the amalgamation, became Deputy General Manager (Scotland), L.M.S.R. Mr. Moffat became Managerial Representative for Scotland and Secretary of the Scottish Committee of the L.M.S.R. in 1927, and held that dual position until 1932, when he was appointed Assistant Chief Officer for Scotland while continuing as Secretary of the Scottish Committee. Mr. Moffat, who took up his present appointment on June 16, on the retirement of Major Malcolm S. Speir, will be responsible for the management of the Northern Division of the L.M.S.R.

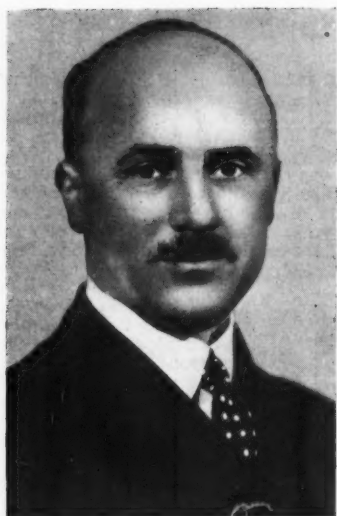
Mr. J. L. Adam, Chief Surveyor to the British Corporation of Shipping & Aircraft, has been elected President of the Institute of Welding, and Dr. J. H. Paterson, Vice-President, for 1947-48.

The King has awarded the Imperial Service Medal to six employees of the Department of Railways, and to six employees of the Department of Road Transport & Tramways, New South Wales.

Mr. W. J. McLaughlin has been appointed Secretary of the Aluminium Development Association, in place of Mr. E. J. Davies, who has resigned. Mr. J. D. Beddows, who has been with the Association as Chief Metallurgist since 1944, has resigned to take up an industrial position in the Midlands; and Mr. J. C. Bailey, who has been on the staff since 1946, has been appointed Technical Officer, to take over most of the duties previously carried out by Mr. Beddows.

We regret to record the death on July 7, at the age of 66, of Mr. Ion Buchanan Pritchard, who retired at the end of 1945 from the position of Legal Adviser to the Railway Companies' Association, and who was Chief Legal Adviser to the L.N.E.R. from 1929, and to the G.W.R. from 1941, until, for reasons connected with his health, he retired from both those positions as from December 31, 1942.

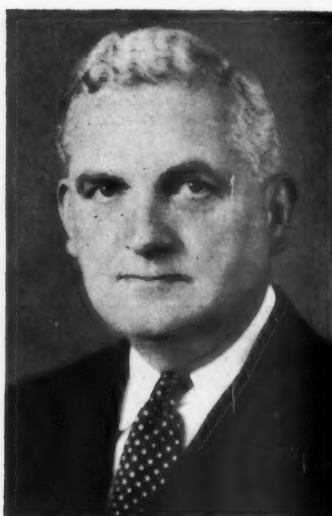
Mr. C. Johnstone, Assistant Chief Commercial Manager (Passenger), L.M.S.R., who retired on June 30, joined the Caledonian Railway as a junior clerk at Aberdeen in 1901. In 1906 he was transferred to the Rates, Fares & Excursion Department, Office of the Superintendent of the Line, Glasgow, and in 1912 became deputy, and later Clerk-in-Charge, of the department. On the amalgamation in 1923 Mr. Johnstone was appointed Chief Clerk to the Divisional Passenger Commercial Superintendent for Scotland, L.M.S.R., and in 1924 became Railway Clearing House Representative and was attached to the General Superintendent (Passenger Commercial) at Derby; in 1929 he was made Rates & Fares Assistant. In 1932 he was appointed District Passenger Manager, Liverpool, a post which he held until 1938, when he became Assistant to the Chief Commercial Manager (Passenger) at Euston. He was appointed Assistant Chief Commercial Manager (Passen-

**Mr. C. Johnstone**

Assistant Chief Commercial Manager (Passenger),
L.M.S.R., 1942-47

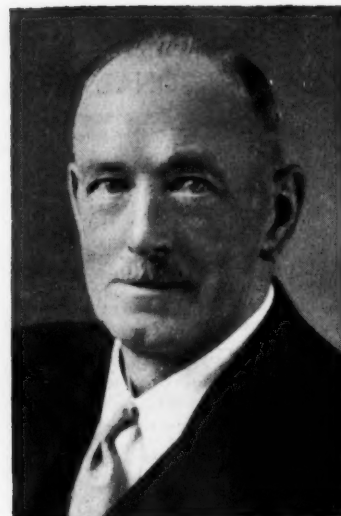
ger) in 1942. Mr. Johnstone represented the L.M.S.R. on the Fares & Services Advisory Committee for the L.P.T.B. Pooling Scheme, and was for a period a member of the R.E.C. Passenger Committee. He was also a member of the R.C.H. Superintendents' Coaching Traffic Conference. In Scotland, Mr. Johnstone took a keen interest in railway ambulance work, and was for two years Secretary of the Aberdeen class, and afterwards for several years Honorary Secretary of the Caledonian Railway Ambulance Brigade.

Mr. R. Bagwell, who, as recorded in our June 27 issue, has been appointed Assistant Chief Commercial Manager (Passenger), L.M.S.R., was born in 1901 and was educated at Harrow and at Brasenose College, Oxford. He entered the company's service in 1928 at Newport Pagnell in the (then) Chief General Superintendent's Department, and in 1931 was appointed Assistant District Controller, Preston. Under the re-organisation in the next

**Mr. R. Bagwell**

Appointed Assistant Chief Commercial
Manager (Passenger), L.M.S.R.

year he was transferred to the headquarters of the Chief Commercial Manager's Department at Euston, and in 1934 was appointed Head of the Passenger Train Services Section (Passenger Revenue). In April, 1936, he became Acting Assistant District Passenger Manager, Birmingham, and in the next October was appointed Chief Trains Clerk in charge of the Euston Office of the Divisional Superintendent of Operation (Western Division). In February, 1938, he went to the U.S.A. and was attached to the Pennsylvania Railroad, to study American railway methods. He returned to England in February, 1939, and became District Controller, Rowsley; in March, 1940, he was appointed District Controller, Carlisle. In April, 1944, Mr. Bagwell was appointed to the temporary position of General Assistant to the Divisional Superintendent of Operation, Crewe, and in July, 1945, was made District Passenger Manager, London, which position he has vacated to take up his present appointment.

**Mr. C. N. Mansfield**

Mineral Manager & Principal Assistant to Chief
Commercial Manager, L.M.S.R., 1943-47

Mr. C. N. Mansfield, Mineral Manager & Principal Assistant to the Chief Commercial Manager, L.M.S.R., who has retired, joined the Midland Railway at Derby in 1900. After transferring to Leeds in 1909 as Assistant Mineral Agent and to Manchester in 1912 as District Mineral Agent, he joined the Royal Engineers in 1915 and served in Salonika and Turkey. He was demobilised with the rank of Major in 1920. Mr. Mansfield was appointed London Mineral Agent for the Midland Railway in 1921, and continued to hold the same position on the L.M.S.R. on the amalgamation in 1923. In 1926 he was transferred to Derby as Assistant Mineral Manager, and in January, 1935, on the amalgamation of the Mineral and Chief Commercial Manager's Departments, he was appointed Assistant Chief Commercial Manager (Coal). He became Mineral Manager & Principal Assistant to the Chief Commercial Manager in July, 1943. Mr. Mansfield was Chairman of the R.E.C. Mineral Committee

**Mr. R. Paterson**

Appointed Mineral Manager,
L.M.S.R.

**Mr. A. W. Hollingdale**

Divisional Engineer, Cardiff, G.W.R.,
1935-47

**Mr. P. Chilain**

Secretary-General, International Railway
Congress Association

from its inception in 1939, and Chairman of the Mineral Managers' Conference from 1939 until 1946. He was also Chairman of the Joint Standing Committee of the Railways and the Coal Merchants Consultative Committee appointed by the Minister of War Transport in 1941.

Mr. R. Paterson, who, as recorded in our June 27 issue, has been appointed Mineral Manager, L.M.S.R., entered the service of the L.N.W.R. as an apprentice at Kings Langley in 1911, and received training in the Goods, Passenger and Traffic Departments. He served with the Queen's Westminster Rifles (1914-18), returning to the L.N.W.R. in 1919 and being appointed a year later to the Chief Goods Manager's Office. He became Senior Clerk in the Accommodation and New Works Departments in 1930, and in 1931 was appointed to the Development Section, Chief Commercial Manager's Office, to specialise in and experiment with various types of containers and equipment in connection with the transfer of bulk mineral traffic to and from road and rail vehicles. In 1934 he was made Assistant to the District Goods & Passenger Manager, Derby. Mr. Paterson was appointed Goods Agent, Nottingham, in 1937; Assistant District Goods & Passenger Manager, Northampton, in 1938; Goods Agent, St. Pancras & Somers Town, in 1941; Assistant District Goods Manager, Birmingham, in 1942; and District Goods Manager, Bolton, in 1943, which position he now vacates on taking up his new appointment.

Mr. A. W. Hollingdale, who, as recorded in our June 20 issue, has retired from the position of Divisional Engineer, Cardiff, Great Western Railway, was articulated to the late Mr. C. H. Thomas, Engineer, Brecon & Merthyr Tydfil Junction Railway, and then was appointed to a junior position in the Divisional Engineer's Office, Newport, of that railway, in 1905. He received successive promotions until, in 1925, he became Assistant Divisional Engineer, Newport, for the G.W.R., which had absorbed the B.M.T.J.R. Mr. Hollingdale was associated with many important works, including Newport and Cardiff reconstructions and the Severn Tunnel Junction and Rogerstone schemes. He was appointed Divisional Engineer, Cardiff, in 1935. He served with the Royal Engineers on railway construction works in France from 1916 to 1919.

Mr. P. Ghilain, Secretary-General of the International Railway Congress Association, and General Secretary of the Executive of the 14th session of the congress which has just been concluded, at Lucerne, is Director of the Locomotive & Running Department of the Belgian National Railways. Mr. Ghilain joined the Belgian State Railways in 1909, and, after two years as Engineer in the repair shops, was transferred to the administrative side of the Locomotive & Running Department. From 1925 to 1927 he was President of the Committee of Reception for Material & Stores, and in the latter year, after the formation of the Belgian National Railways Company, he became Assistant *Chef de Cabinet*, Ministry of Transport. Shortly afterwards he was appointed Engineer-in-Chief, Locomotive & Running Department, Belgian National Railways, of which department he has been Director for the past several years. Mr. Ghilain has been Secretary-General of the International Railway Congress Association since 1925.

Mr. A. G. Ticehurst, A.M.I.C.E., who, as recorded in our July 4 issue, has been appointed Plant Assistant to the Chief Engineer, Great Western Railway, was educated at the Mercers' School, London, and subsequently served a pupillage with Vickers Limited, Erith. Before entering the service of the G.W.R. he held technical executive positions with a number of large mechanical and civil engineering firms, and latterly with the Regional H.Q. Engineering Staff of the Control Commission for Germany. He has specialised in the use and maintenance of many forms of mechanical and electrical equipment as applied to civil engineering work, and has had wide experience in their application, operation and maintenance. Mr. Ticehurst is an Associate Member of the Institute of Industrial Administration.

Mr. J. J. Finlayson, Assistant Works Manager, Cowlairs, L.N.E.R., who, as recorded in our March 14 issue, has been appointed Locomotive Works Manager, Gorton, was educated at Allan Glen's School and the Royal Technical College, Glasgow, and served an apprenticeship from 1918 to 1923 with the North British Locomotive Co. Ltd. In the latter year he joined the L.N.E.R. in the Chief Mechanical Engineer's Department at Cowlairs Works, where, after holding various appointments, he became, in 1934, Assistant to Works Manager (Plant & Road Motors) and, in 1937, Assistant to Works Manager (Carriages & Wagons). In 1942 Mr. Finlayson was appointed Assistant to Works Manager (Locomotives), Cowlairs. In 1945 he became Acting Assistant District Locomotive Running Superintendent, Western District, Scotland, but in 1946 returned to Cowlairs Works as Assistant Works Manager.

We regret to record the death on June 29, at the age of 85, of Mr. Frederick Stevens, O.B.E., who, as Town Clerk of Bradford (a position he held from 1899 to 1919), took a leading part in the negotiations of 1907 with Sir Ernest Paget, Sir Guy Granet, and Mr. J. S. Beale, of the Midland Railway, over the well-known scheme to put Bradford on a direct line from London to Scotland. In the face of certain local, though serious, difficulties, the railway company introduced a Bill for abandonment of the scheme. Such was the feeling aroused in Bradford by that step that the City Corporation instructed Mr. Stevens to undertake the delicate task of obviating those difficulties. With such success did he do so that the Midland Bill for abandonment was dropped, although, in fact, the line was never constructed. From one cause and another the start of the work was postponed, until the outbreak of war in 1914 killed the scheme. Mr. Stevens's nephew, Mr. O. S. Nock, is a frequent contributor to our columns, and to our associated publication, *The Railway Magazine*.

ECONOMIC PLANNING BOARD

The Lord President of the Council has announced the membership of the Economic Planning Board, of which the Chairman is Sir Edwin Plowden, Chief Planning Officer, as follows:—

Sir William Coates (a Deputy-Chairman of Imperial Chemical Industries Limited), nominated by the Federation of British Industries and British Employers' Confederation; Sir Graham Cunningham (Chairman & Managing Director, Triplex Safety Glass Co. Ltd.), nominated by F.B.I. and B.E.C.; Mr. A. Naesmith (General Secretary, Amalgamated Weavers' Association), nominated by T.U.C.; Mr. W. R. Verdon Smith (Director, Bristol Aeroplane Co. Ltd.), nominated by F.B.I. and B.E.C.; Mr. J. Tanner (President, Amalgamated Engineering Union), nominated by T.U.C.; Mr. H. V. Tewson (General Secretary, T.U.C.), nominated by T.U.C.; Sir John Woods (Permanent Secretary, Board of Trade); Sir Godfrey Ince (Permanent Secretary, Ministry of Labour & National Service); Sir Archibald Rowlands (Permanent Secretary, Ministry of Supply); Mr. A. S. Le Maitre, Mr. H. T. Weeks, Mr. F. W. Smith (Central Economic Planning Staff); Mr. R. L. Hall (Director, Economic Section, Cabinet Office).

Railway & Traders' Conference at Birmingham

Mr. J. A. Warren-King (District Goods Manager, Birmingham, G.W.R.) took the chair at the meeting on June 20 of the Railway & Traders' Conference for the Birmingham, South Staffordshire, East Worcestershire, and North Warwickshire area. He was supported by the local goods and passenger officers of the G.W.R. and L.M.S.R. On the traders' side, the meeting was attended by a representative body of delegates from the Chambers of Commerce and Trade Associations of the area, headed by Mr. C. E. Jordan (Accles & Pollock Limited), representing the Federation of British Industries.

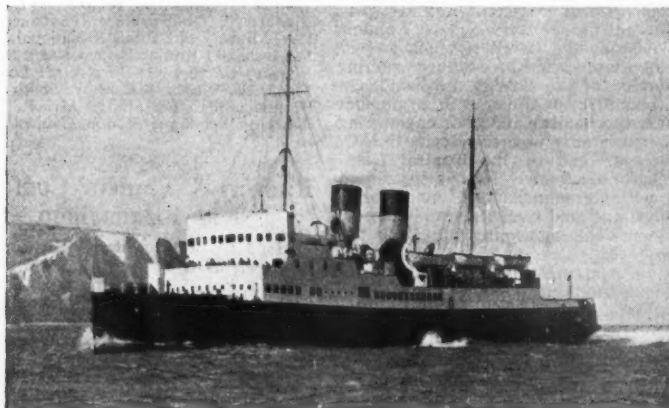
Mr. L. C. Brittlebank (District Goods Manager, Birmingham, L.M.S.R.), spoke appreciatively of the work of the conference and of the spirit of helpful co-operation which it had engendered between local industry and the railways serving the area. The meetings provided a means of the two sides getting to know one another, and of understanding each other's problems. Contacts had been formed which had been most effective in surmounting the difficulties with which the trade of the country had been confronted in recent years. He expressed the view that the conference should continue to function whatever might be the future organisation of the railways.

Mr. C. E. Jordan, on behalf of the Traders' Panel, endorsed Mr. Brittlebank's remarks and spoke of the determination which had been shown by both sides to realise each other's problems and give all the assistance in their power to the mutual benefit of trade and transport in the area.

Other tributes to the value of the conference were paid by Mr. A. V. R. Brown (Divisional Superintendent, Birmingham, G.W.R.); Mr. J. B. Dunkley (District Passenger Manager, Birmingham, L.M.S.R.); Mr. Felix J. Blakemore (Wolverhampton Chamber of Commerce); Mr. J. W. Collinge and Mr. W. A. Standley (Birmingham Chamber of Commerce); and Mr. H. Woolley (Co-operative Union).

IMPROVED THIRD CLASS SLEEPING CARS FOR L.N.E.R.—The L.N.E.R. is to build six third class sleeping cars of an entirely new design, including single-berth and double-berth compartments equipped with full bedding and individual washbasins. Hitherto, on all British railways the third class sleeping cars have provided only lying-down accommodation with rugs and pillows, based on four berths per compartment. Each coach will provide sixteen berths—eight in single compartments and eight in four double-berth compartments—in addition to an attendant's compartment, lavatory, and toilet. The new vehicles will be experimental and will supplement, but will not at this stage displace, the existing third class sleeping cars. The charges have not yet been fixed, but will be between the present first class and third class sleeping-berth charges.

Southern Railway Boulogne Services



The converted ss. "Dinard" leaving Dover for Boulogne on her first trip as a motorcar carrier

Last week, we referred briefly to the resumption by the Southern Railway on July 1 of its Folkestone-Boulogne run, and also to the inauguration on the same day of a new Dover-Boulogne service for the transport of motorcars. To mark the occasion, officers of the Southern Railway and Press representatives accompanied the vessels to Boulogne, one half of the party sailing in the *Isle of Thanet* from Folkestone and the remainder in the *Dinard* from Dover.

On the resumed Folkestone-Boulogne service, which provides first, second, and third class accommodation between London and Paris, with first class Pullman car service on the English train, passengers leave London Victoria at 9 a.m. and arrive at Paris Nord at 4.21 p.m. F.T. On the return journey, the train leaves Paris at 1 p.m., F.T., and arrives at Victoria at 10.22 p.m.

The sea voyage in the *Isle of Thanet* takes 1½ hours. This vessel, which was built in 1925 and has since been fitted as an oil burner, will take 1,100 passengers. She is 342 ft. long by 45 ft. wide and of 2,701 gross tonnage. On the outbreak of war she became a hospital carrier, plying between Newhaven and Dieppe until the Dunkirk evacuation in 1940, when her role was an important one. In the D-Day landings the *Isle of Thanet* was positioned as relief H.Q. ship.

A NEW MOTORCAR SERVICE

The conversion of the *Dinard* to a motorcar carrier for the new Dover-Boulogne service is of special interest. This ship previously worked the Southampton-St. Malo run and entered the Southern Railway passenger service in 1924. She is of 2,313 gross tonnage, has a length of 325 ft., and during the war had an interesting career as a hospital carrier. On one particular spell of war service she visited 30 overseas ports, mostly in the Mediterranean area, and covered 30,000 miles in nine months, carrying nearly 8,000 service patients.

With the post-war revival of Continental traffic, it became apparent that there would be a boom in motoring abroad as soon as circumstances allowed, and it was decided last autumn to reconstruct the *Dinard* as a motorcar carrier. This work of reconstruction included the repair of extensive mine damage, removal of troop equipment, new bridge and upperworks and accommodation for crew. construction

of two car decks with modern ventilation, and A.A. and R.A.C. offices.

Also included is a loading space for two motor coaches, and a turntable for cars on the main car deck, designed to work on the first-on-first-off principle. Loading and unloading at three points to facilitate despatch is another feature of the conversion.

With these structural alterations the *Dinard* is now the largest Southern Railway vessel carrying motorcars on the Channel service. She has accommodation for 70 to 80 cars and 300 passengers and does the daily trip in 1 hr. 45 min.

WELCOME AT BOULOGNE

On arriving at Boulogne, where the two parties became one, the visitors were met by Mr. W. E. Newbold, who has been Agent for the Southern Railway at Boulogne for many years. Later, M. Lacroix, President of the Boulogne Chamber of Commerce, M. de Viry, Port Engineer, Boulogne, M. Alexander, S.N.C.F., and M. Simoneau, Sous-Prefet, gave the guests an official welcome on behalf of the citizens of Boulogne.

Luncheon was served in the buffet of the rebuilt Gare Maritime. This new structure, built on the site of the station destroyed during the war, may be taken as typical of the enthusiastic way in which France is putting her railways in order. The station will be opened formally by the President of the French Republic on July 12.

At the luncheon, M. Lacroix accorded the visitors a warm welcome, and Mr. R. H. Hacker, Continental Superintendent, Southern Railway, responding, paid a tribute to the Marine Department for the way in which the work of reconditioning the port area of Boulogne had been carried out under very difficult conditions.

M. de Viry extended a welcome to the representatives of the Press of England and France and also paid a tribute to the contractors who had got the station ready in time for their visit.

Mr. R. P. Biddle, Docks & Marine Manager, Southern Railway, said that this must be a proud day for Boulogne, and the Southern Railway was glad to be associated with Boulogne once again in a service which had been interrupted by the war. They had shown great enterprise in rebuilding the Gare Maritime and the quay area of Boulogne in so short a time. Those who saw Boulogne today for the first

time since the war could not possibly imagine what had been done in the past six months in the way of reconstruction.

In the afternoon, the visitors were taken on a short motor-coach tour of Boulogne, when they had an opportunity of seeing, many of them for the first time, the extent of the damage done to the town by bombing during the war, and at the same time were able to appreciate the extent of the work of reconstruction now going on in Boulogne itself and in the port area.

Among those who accepted invitations to be present on this occasion were:—

Swiss Federal Railways: M. W. Ernst, S.N.C.F.; M. le Matre. Southern Railway: Messrs. J. W. D. Abel, Assistant Superintendent Engineer, Docks & Marine; H. J. Bourn, Continental Passenger Assistant; J. Goldsmith, Chief of Car Booking Office; G. Wynne Davies, Assistant Public Relations & Advertising Officer; S. J. Grant, Continental Freight Superintendent; H. W. Ling, Continental Special Traffic Section; P. Nunn, London (East) Divisional Superintendent; D. Sheppy, Divisional Motive Power Superintendent (Eastern); A. C. Streatfield (Press Agent); H. A. Venton (Publicity Department); and M. Ricci, Assistant Agent, Boulogne.

Fulmer Research Institute Opened

In the Fulmer Research Institute, formally opened by Sir Stafford Cripps, President of the Board of Trade, on July 2, are provided facilities for research on lines similar to those at the Mellon and Battelle centres in the United States. It is the only important research centre in Great Britain where independently sponsored work can be carried out confidentially, and where the results of research and any patents arising therefrom remain the property of the sponsor, who also may send his nominees to work at the Institute.

The centre is housed in a converted country manor at Stoke Poges, Bucks., standing in 10 acres of ground, and its equipment includes a modern workshop fitted with precision tools for the construction, modification, and servicing of experimental apparatus.

METALLURGICAL RESEARCH

Eventually, it is hoped to provide a centre capable of conducting many types of industrial research, having assurance that both the knowledge and equipment necessary to carry it out are available, but for the present it is intended to concentrate on problems in the field of metallurgy, covering purification and distillation, application of thermodynamics to industrial metallurgy, corrosion, protection and finishing, development of new casting processes and procedures, etc.

On the opening day, visitors were taken on a tour of inspection, after which Colonel W. C. Devereux, Chairman & Founder, outlined the objects of the Institute. He then introduced Sir Stafford Cripps, who said that today this country was woefully short of research men, for which reason the Government welcomed the initiative which led to the establishment of the Fulmer Research Institute. Such a centre would economise in scientific effort.

In conclusion, Mr. E. A. G. Liddiard, Director of Research, thanked Sir Stafford Cripps for coming to the centre, and said that, although the Institute hoped to attract private firms, it was prepared to take on work for groups of firms or for a particular section of industry if such work could be done better at the Institute.

Great Western of Brazil Railway Co. Ltd.

The ordinary general meeting of the Great Western of Brazil Railway Co. Ltd. was held at River Plate House, London, E.C.2, on July 2, Mr. W. M. Codrington, Chairman of the company, presiding.

The Chairman, in a statement circulated with the report and accounts, said that during the year under review, a fresh scheme of arrangement was arrived at with the debenture holders, which brought considerable alleviation of the burden represented by the service of their debenture capital. The 4 per cent. debentures, of which there were now £719,400 outstanding, were entitled to an annual sinking fund of £15,415, plus accrued interest on the debentures already redeemed. Needless to say, the sum required for this purpose had to be found from the taxed income of the company; and with income tax at present-day rates, and with the yearly increase in the amount set aside in respect of interest on bonds redeemed, the charge for service of the loan capital became progressively more onerous.

As a result of negotiations with the 4 per cent. debenture holders an agreement was reached, under which, in return for an increase in their rate of interest from 4 per cent. to 5½ per cent., the annual charge for the sinking fund was reduced to a fixed annual sum of £21,766 as from 1945. This compared with a total provided for this purpose last year of £54,000. The increased interest would cost a maximum of £10,791 per annum, which would decline each year as the issue was redeemed.

This factor, coupled with that of a lower provision for British income tax, accounted for the fact that, though their profit for 1946 at £159,000 was some £4,000 less than that earned in the previous year, the net revenue balance showed a surplus of £14,832 compared with a deficit of £29,574.

The year 1946 was again one of intense activity in all departments. They were favoured by an exceptionally good crop of both sugar and cotton, the former showing an increase of 137,000 tons and the latter of 44,000 tons: the total of tons transported increased by 4.75 per cent. with an increase in train-kilometres of only 2.6 per cent., and, more important still, in engine-kilometres of only 1.26 per cent.

Some progress was made with the rehabilitation of the line and its equipment. More sleepers were put into the track than in any year since 1926. A further 15 locomotives, making 26 in all, were converted for oil-burning, and the first 100 of 200 new 30-ton box wagons, provided under the company's agreement with the Brazilian Government, were assembled and put into service.

Expenditure of the moneys furnished to the company by the Brazilian Government made considerable progress during the year and was now nearly completed. The outstanding achievement under this heading was the reconstruction in ferro-concrete of a number of viaducts which had been condemned owing to their weakness and which hitherto limited severely the loads which could be hauled over the Central Section.

In the autumn the Chairman visited Brazil. He inquired whether the Brazilian Government had at that time any intention to exercise the right to buy out the company under Article 52 of their lease contract. They replied that they had every confidence in the present Anglo-Brazilian administration and had no desire to make any change. The Chairman did not fail

to emphasise the plight of the stockholders in their company, who had been furnishing an admittedly efficient service without enjoying any reward since 1929.

It was, of course, too early to forecast results of the present year. The latest information was that sugar traffic during the early months had been heavy and that sufficient rain had fallen to kindle hopes of yet another good crop year.

The report was adopted.

Parliamentary Notes

Reductions in Holiday Train Services

Mr. P. L. E. Shurmer (Birmingham, Sparkbrook—Lab.), on the motion for the adjournment of the House of Commons on June 24, raised the question of the cuts in holiday train services. In the course of his speech, he said that, in reply to a question he had put to the Minister of Transport on May 28 about the cut which was to begin on June 10 and continue until October 5, Mr. Barnes had said that during that period coal stocks must be built up by every economy that could reasonably be made. He entirely agreed, but he did not agree it should be done at the expense of the workers and their families, many of whom for the first time in their working lives had secured holidays with pay. He would be told the cut was already in operation, and nothing could be done. Surely that could not be true. The railways could easily put on extra trains at any time. It was not a question of rolling stock. The railways had stated only a few weeks ago that they expected a record holiday traffic this summer; but all hopes of providing the public with any better facilities than last year had been shattered when, in accordance with a decision of the Cabinet Fuel Committee, the Minister of Transport had directed that, to save coal, the summer timetable service must be reduced by 10 per cent. compared with 1946. With fewer trains for more passengers, the difficulties experienced last year in regulating the crowds at stations would be greatly increased.

If it were a question of millions of tons of coal, one would realise the necessity of conserving that amount, but the cut would amount only to 250,000 tons of coal, or less than one day's production. It was not the Minister of Transport who ought to be in the dock, but the Minister of Fuel & Power for issuing an order which prevented the running of extra holiday trains. They were told they needed to build up a stock of 15 million tons for the winter. They had already, with 17 weeks to go, nearly 8½ million in stock, and the position in the mining industry improved week by week and there was every sign of an increase in coal production. In addition, 22,000 more men had entered the industry since the decision was taken. Surely the Minister could risk less than one day's coal production to give a little break to the war weary?

Squadron-Leader E. Kinghorn (Great Yarmouth—Lab.) said that in his constituency hotels requisitioned during the war had been refurbished by grants from the Board of Trade and this year were planning to get into their stride. It was possible for stationmasters to put on extra trains even if schedules were arranged. He asked the Parliamentary Secretary to consider that holidays were no luxuries, especially in towns like Yarmouth, Lowestoft and Brighton, where people expected to make their living from the holiday traffic.

Mr. G. R. Strauss (Parliamentary Secretary, Ministry of Transport) said that Mr. Shurmer and Squadron-Leader Kinghorn had put very forcibly the inconvenience which was undoubtedly going to arise and affect a considerable number of persons. He could assure them nobody regretted the decision more than the Government did, but it had been forced to the conclusion that in the national interest it was essential to make some saving during the summer in the coal consumption of the railways. The decision had been reached a little time ago to make a cut of 4 per cent. in railway running during the summer months. That was not a large percentage, but it would save 10,000 tons a week and about 250,000 tons altogether. It was impossible, or anyhow most undesirable, to make any cut in the freight trains. It was also undesirable to make any cut in the peak-hour trains. To make the necessary cut in train mileage it was necessary therefore to reduce the remaining railway services, namely, the "off-peak" suburban trains and the long-distance trains. That decision would principally affect holiday traffic. There was to be a cut of 10 per cent. in those long-distance and "off-peak" suburban trains. The railways, however, had been at great pains to make those cuts where they would least inconvenience the public. In fact, they had cut a great many "off-peak" suburban trains so as to make the holiday trains as frequent as possible. To consider the reduction in proper proportions they must remember that the cut would be about 10 per cent. on last year's service, but there would be the same number of trains running as in 1945 and about 10 per cent. more than in 1940. He said frankly that they had no indication whether summer traffic would be larger this year or not. Last year the traffic had been substantially below the year before, and up to May of this year there had been a steep drop indeed in passenger traffic; not only during the particularly cold weather, but up to early May. The drop had amounted to 20 to 25 per cent. But that, of course, did not mean that there would be a drop during the coming summer holiday months.

Petitions Against Transport Bill

Commander A. H. P. Noble (Chelsea—C.) on June 26 presented to the House of Commons a petition signed by 23,000 persons, who, he said, were either stockholders, employees or users of British railways. The petitioners, he said, believed the Transport Bill would deprive them of their property without just compensation, and would discourage enterprise in industry. They therefore asked for a full public inquiry before any change was made in the ownership of British railways.

Mr. W. M. F. Vane (Westmoreland—C.) on June 26 also presented two petitions objecting to the Transport Bill. He said the first was signed by 23,000 persons, who depended on road transport for their supplies of goods and passenger services. They believed the proposed State monopoly would be less efficient and more costly than the present transport system, and asked for a public inquiry into it before the new proposals became law.

Mr. Vane said the second petition was signed by 164,000 persons, engaged in or using road transport, asking that proposals for the nationalisation of the industry might not pass into law. The petitioners feared that under Government-owned transport services many of them would lose their means of livelihood, and the result would be harmful to the trade and industry of the nation.

Questions in Parliament

Euston to Manchester Train

Air-Commodore A. V. Harvey (Macclesfield—C.) on June 30 asked the Minister of Transport why, as from June 16, 1947, the 2.50 p.m. train from Euston to Manchester only ran Fridays and Saturdays.

Mr. Alfred Barnes (Minister of Transport), in a written answer, stated: The withdrawal of this train from Monday to Thursday is part of the 10 per cent. reduction in scheduled passenger train mileage this summer.

Waterloo to East Dorset Train

Colonel M. J. Wheatley (Dorset Eastern—C.) on June 30 asked the Minister of Transport if he was aware of the inconvenience caused to persons living in East Dorset, especially business men, by the cancellation of the 6.30 p.m. train from Waterloo; and if he would arrange for it to be re-instated.

Mr. Alfred Barnes, in a written answer, stated: No. The withdrawal of this train, which was the least heavily loaded of the morning and evening group of trains from Waterloo to Bournemouth and Weymouth, was a part of the 10 per cent. reduction in passenger services to save coal.

Kings Cross-Edinburgh Night Train

Lord John Hope (North Midlothian & Peebles—C.) on June 16, asked the Minister of Transport (1) if, in the interests of the travelling public, he would reconsider his decision to suspend the running of the 1 a.m. train from Kings Cross to Edinburgh; and (2) if he was aware of the inconvenience that would be caused to the travelling public by the withdrawal of the 1 a.m. train from Kings Cross to Edinburgh; and whether he would arrange either for one of the night trains to Edinburgh to leave Kings Cross at 11 p.m. or for the 11.30 p.m. train from Kings Cross to Newcastle to run on to Edinburgh.

Mr. Alfred Barnes: The withdrawal of this train is part of the 10 per cent. reduction in services this summer. I am informed that the 11.30 p.m. train to Newcastle is already fully loaded and could not take extra coaches for Edinburgh passengers, and that, if the sleeper train for Edinburgh were to leave at 11 p.m., arrivals at certain important destinations in Scotland would be from 2 to 5 hours later owing to re-timing difficulties.

Lord John Hope: Does the Minister realise that he could scarcely have taken off a train which is wanted more, not only by members of the public, but also by Scottish Members of Parliament; and in view of that fact will he not reconsider this decision? This is a most important train, and it would make a great deal of difference if it could be put on again.

Mr. Barnes: I am always ready to look into matters referred to in the House, but on this question affecting the 10 per cent. reduction one must be guided, on the whole, by the practical experience of the railway administration.

The Reverend Campbell Stephen (Glasgow, Camlachie—I.L.P.): Could the Minister say whether all Scottish interests were consulted before this decision was made?

Mr. Barnes: No. I do not think it would be practicable to discuss it with all the interests, over the whole system, affected by any particular train.

Lt.-Commander Clark Hutchison (Edinburgh West—C.): Would the Minister undertake to restore this train in the autumn when the 10 per cent. cut ends?

Mr. Barnes: Of course, at the moment it

is only for the summer period, to assist in the re-stocking of coal. I have no reason to anticipate that it will continue beyond that period, but I will bear that point in mind.

Sir William Darling (Edinburgh South—C.): Would the Minister also bear in mind that a 10 per cent. cut on the Scottish railway system is a much more severe one than a 10 per cent. cut on the English system?

Mr. Barnes: I, of course, always appreciate the special need of Scotland, and never overlook it.

Sir William Darling: This is a special disadvantage.

Smooth-Running Track Tests

Viscount Hinchinbrooke (Dorset Southern—C.) on June 23 asked the Minister of Transport whether tests of the smooth-running track between Wimbledon and Raynes Park Stations had yet been completed; and whether that type of track was now to be introduced generally on main-line railways.

Mr. Alfred Barnes, in a written answer, stated: The tests between Wimbledon and Raynes Park have been completed and a limited mileage of smooth-running track is being made, experimentally, by the Southern Railway as and when labour and materials are available. It would be premature, as yet, to say whether it will be introduced generally.

Travel to Northern Ireland

Lt.-Colonel Sir Walter Smiles (Down—C.) on June 30 asked the Minister of Transport if he was aware that boys and girls attending schools in Great Britain, whose parents lived in Northern Ireland, were having great difficulty in obtaining sailing tickets at the end of the summer term; and if he would put on an extra steamer from either Liverpool or Heysham to Belfast on either July 28 or 29.

Mr. Alfred Barnes, in a written answer, stated: I am not aware of any such difficulty. Both the L.M.S.R. and the Belfast Steamship Company have special arrangements for dealing with applications on behalf of school children proceeding to their homes in Ireland. The Belfast Steamship Company has no tonnage available to provide extra sailings from Liverpool. The service from Heysham will be increased by an additional 20 sailings each way between July 7 and August 30.

Railway Seating Accommodation

Lord Faringdon in the House of Lords on June 24 asked His Majesty's Government whether the wartime rule that, in cases when on trains there was no accommodation in third class carriages, passengers might, with due regard for the prior claims of first class ticket holders, occupy first class seats, still held good.

Lord Walkden: Passengers holding third class tickets may occupy seats in first class compartments only with the express permission of a member of the railway company's staff. The instruction on this matter to the staff, which is still in force, is that when the third class accommodation on a train is seriously overcrowded they may permit holders of third class tickets to occupy seats in first class compartments without extra charge; but before giving such permission they must consider the needs of first class passengers likely to join the train at subsequent stations who might thereby be deprived of seats. I would add that, where first class fares are advertised, the companies are under an obligation to provide suitable accommodation for first class passengers.

Earl Howe: Is Lord Walkden aware that on some of the railways, notably the Southern line from Worthing, a first class passenger who wants a seat goes to a third class carriage every time; and that under the operation of this rule the privilege referred to is very much abused?

Lord Walkden: I am afraid I am not aware of details of that kind, but if Earl Howe will let me have particulars I will have the matter looked into.

Children's Fares

Mr. John Battley (Clapham—Lab.) on June 25 asked the Minister of Transport whether, in view of the raising of the school-leaving age to 15 years and the consequent hardship to many families, he would consider the desirability of immediately extending the age to 15 years for children's half-fares on all forms of passenger transport.

Mr. Alfred Barnes stated in a written answer: The matter is under consideration, but I am not as yet in a position to announce any decision.

Railway Radio Communication

Sir Wavell Wakefield (Marylebone—C.) on June 25 asked the Postmaster-General if suitable wavelengths had been allocated to the railways in order that modern methods of wireless communication might be used between train crews and train movement control points, so that travelling might become safer and unnecessary delays and stoppages avoided.

Mr. Wilfrid Paling (Postmaster-General) stated in a written answer: Yes. Wavelengths have been allocated to the railway companies to cover their immediate radio communication needs. Any additional requirements will receive consideration.

Losses of Mailbags on Railways

Air-Commodore A. V. Harvey (Macclesfield—C.) on June 25 asked the Postmaster-General how many mailbags containing registered and ordinary mail, respectively, had been lost on the railways since January 1, 1946.

Mr. Wilfrid Paling, in an amended reply, has since stated: For the period January 1, 1946, to June 11, 1947, a total of 1,384 mail bags (of which 1,346 contained registered items) which were conveyed by rail for part of their journey are recorded as missing, but it cannot be said with certainty that all these losses occurred on the railways. The figure represents about 0.001 per cent. of the total number of mailbags despatched by rail during this period.

Requisitioned Railway-Owned Premises

Lt.-Commander Clark Hutchison (Edinburgh West—C.) on June 30 asked the Minister of Works whether he would now de-requisition the premises owned by the L.M.S.R. at Nos. 10-11, Rutland Square, Edinburgh, in order that the railway company might proceed with its scheme for converting those premises into six separate dwelling houses for the use of employees of the company who were at present inadequately housed.

Mr. C. W. Key (Minister of Works): I regret that the retention of these premises by my department is necessary owing to the shortage of office accommodation in Edinburgh.

Commander Clark Hutchison: In view of the recommendations contained in the recent report of the Select Committee on Estimates, will the Minister do his best to expedite the release of these premises?

Mr. Key: Most certainly.

Permanent Way Institution: Glasgow Convention

The second post-war convention of the Permanent Way Institution has been held in Scotland during the past week, with Glasgow as the headquarters. The range of visits has covered a wide territory from Edinburgh in the East to Inveraray in the West. The last convention of the P.W.I. held in Scotland was in July, 1935, and the previous one in 1919.

The proceedings began on Saturday last, July 5, with a council meeting at the St. Enoch Hotel, Glasgow, in the morning, and the summer general meeting at 2.30 p.m. at the Royal Technical College, Glasgow. The President, Mr. J. C. L. Train, Chief Engineer, L.N.E.R., presided, and 131 members were present.

The joint report of the Hon. Secretary and the Hon. Treasurer covering the activities of the past half-year showed that sectional meetings, etc., were at least up to pre-war standard, and in some cases in advance. A new section had been formed in Ireland, embracing all Irish railways, and this now had some 250 members on the register.

New members enrolled during the past six months, 661, constituted a record. Of these, 216 were from Irish railways and 78 from India. British railway figures were: L.M.S.R., 126; L.N.E.R., 64; G.W.R., 87; Southern Railway, 51; and L.P.T.B., 10. The financial position of the Institution, though sound, was less satisfactory than was desirable, partly by reason of rising costs—particularly of printing—and also because of subscriptions in arrears. The meeting confirmed the proposal to increase entrance fees. It was agreed that the next summer meeting be held in the Liverpool & Manchester Section's area.

After the formal business had been disposed of, films entitled "The River Clyde," "The Port of Glasgow," "Industrial Clydeside," and "Western Highlands" were shown by courtesy of the L.M.S.R.

ANNUAL DINNER

In the evening the annual summer dinner was held at the Central Hotel, Glasgow, and again Mr. Train presided. Some 220 members, ladies, and guests were present.

The toast of "The City of Glasgow" was proposed by Mr. W. K. Wallace, Chief Engineer, L.M.S.R., who spoke of the commercial importance of the district as a shipbuilding centre, which also had performed miracles during the war in speedy ship repair; as one of the earliest steel centres; and as a great centre of locomotive building which had sent its products all over the world. Glasgow also had a noteworthy reputation for its success in municipal trading.

Councillor David S. Brown, J.P., who also is a railwayman, responded. He apologised for the unavoidable absence of the Lord Provost and spoke of the prominent part railwaymen had taken in Glasgow local politics. Throughout Great Britain no fewer than 3,000 railwaymen were M.P.s or local councillors.

Mr. J. Noel Phillips, Operating Manager, L.M.S.R., Glasgow, proposed "The Prosperity of the Permanent Way Institution," and referred to the increasing co-operation between the operating and engineering departments. One of the regular winter operating problems in Northern Scotland was provided by snow. The L.M.S.R. had no fewer than 26 large, 32 medium, and 195 nose ploughs. Between October 1 and April 30, no trains ran north of Perth

without a snow plough. Last winter 14 snow ploughs had been sent to England. Results of co-operation between operating and engineering departments of the L.M.S.R. in Scotland from 1933 to 1947 had covered 2,418 items and had involved economies of well over £1,500,000 replacement value, and £50,000 annual saving.

Mr. J. C. L. Train, responding, referred to the continuing value of the P.W.I. no matter what form of railway ownership might come. He thanked the officers of the P.W.I. for their work, and said that in the future, as in the past, one might always be proud of being a British railwayman.

The toast of "The Guests" was proposed by Mr. V. A. M. Robertson, and replied to by Mr. E. R. L. Fitzpayne, General Manager, Glasgow Corporation Transport.

For Sunday, the official programme drew attention to the desire of the King that the day should be observed as a National Day of Prayer, and no arrangements were made for the morning.

In the afternoon, the members and ladies enjoyed a motor-coach tour of Central Scotland, embracing the Blane Valley, Lake of Menteith, Braes of Greenock, Callander, Doune, Crieff, Comrie, St. Fillans, Loch Earn, Lochearnhead, Strathgry, Callander, Dunblane, and Stirling. High tea was served at the Crown Hotel, Callander.

On Monday, the party divided, and the male members paid visits to one or other of the shipyards of William Denny & Brothers Limited, at Dumbarton; the bridge building and structural engineering works of Sir William Arrol & Co. Ltd.; and the Coplawhill tramcar works, Larkfield bus depot, and the workshops of the Underground Railway of the Glasgow Corporation.

In the afternoon, the members and ladies made a trip by steamer from Gourock to Dunoon, a trip giving an excellent view of the Clyde shipyards, the engineering works, and the docks.

On Tuesday, one party made an all-day visit to see the work in progress in connection with the North of Scotland Hydro-Electricity Board power scheme at Loch Sloy. Others visited the workshops of the L.N.E.R. District Engineer at Anwick Street, Shettleston, and the L.M.S.R. District Engineer's Workshop at Muirhouse, Maxwell Road. Trips to David Livingstone's birthplace at Blantyre, and to the shoe works of A. L. Scott & Sons Ltd., were provided for the ladies.

On Tuesday evening, members and ladies were given a civic reception in the City Chambers, Glasgow, by the Lord Provost of Glasgow (Sir Hector McNeill) and the Magistrates of the City. During the evening, there was a concert in the Council Hall, and dancing in the Banqueting Hall.

Wednesday was devoted to an all-day trip to Edinburgh, and male members of the party were afforded the opportunity of walking over the Forth Bridge to view the repairs now being effected on the north end of the bridge. Tea was provided at the North British Hotel by courtesy of the L.N.E.R.

The arrangements for Thursday, the last day of the convention, provided for the whole party making a steamer cruise on the Firth of Clyde, the Kyles of Bute, and Loch Fyne, extending as far as Inveraray.

Among those who attended the convention were: Messrs. David S. Brown, B. Lloyd Davies, C. E. Dunton, A. W. M.

Dyke, E. R. L. Fitzpayne, B. P. Fletcher, I. R. Frazer, H. Jones, W. W. Johns, F. Lawson, C. E. Lee, W. Paterson, J. Noel Phillips, J. Ratter, V. A. M. Robertson, W. Y. Sandeman, M. G. R. Smith, N. W. Swinneron, J. C. L. Train, J. A. R. Turner, E. H. Tustain, W. K. Wallace, and W. A. Wilcox.

Notes and News

Motor Vehicles (Construction & Use).

—The Minister of Transport has made the Motor Vehicles (Construction & Use) (Amendment) Regulations, 1947.

Signals Staff Required.—Four assistant engineers (signals) and six draughtsmen (signals) are required by the South African Railways. For full particulars see Official Notices on page 55.

Civil Engineers Required.—Civil engineers are required for the Way & Works Departments of the Government Railways in Nigeria and the Malayan Union. For full details see Official Notices on page 55.

Macrome Limited Manchester Office.

—Mr. P. W. D. Winkley, formerly Sales Office Manager at the company's head office, has been appointed Branch Manager at the Manchester office (241, Deansgate) of Macrome Limited.

Liverpool Overhead Traffic.—Gross receipts of the Liverpool Overhead Railway for the six months to June 30 were £4,951 below those of a year ago, the total of £71,314 comparing with £76,265 in 1945. In the week ended June 29 receipts of £2,986 showed a decrease of £41.

L.P.T.B. Extension of Time Application.—The London Passenger Transport Board has applied to the Minister of Transport for an Order to extend by three years the time now limited in respect of the carrying out of certain works, compulsory purchase of lands, and provision, equipment, and maintenance of trolley vehicle routes. A copy of the application may be inspected at the office of the Solicitor to the London Passenger Transport Board, at 55, Broadway, Westminster, S.W.1, from whom copies may be obtained, price 6d. each (post free 8½d.), and to whom any representation against the application must be submitted not later than July 26, 1947.

L.N.E.R. Dividends.—At a meeting of the board of directors of the London & North Eastern Railway Company on July 4 the undermentioned interim dividends for the past half-year were declared:—2 per cent. actual for the half-year on the 4 per cent. first guaranteed stock; 2 per cent. actual for the half-year on the 4 per cent. second guaranteed stock; 2 per cent. actual for the half-year on the 4 per cent. first preference stock; 2½ per cent. actual for the half-year on the 5 per cent. redeemable preference stock, 1955; 1 per cent. actual for the half-year on the 4 per cent. second preference stock; in each case less tax. The warrants will be posted on or about August 14.

R.E. Transportation Units.—The War Office has announced its intention to form Transportation units of the Royal Engineers, which will comprise railway, port operating and maintenance, and inland water transport units. These will be included in either the Supplementary Reserve or the Territorial Army. It is expected that these Transportation units will

be formed in the comparatively near future, and the War Office states that intending volunteers for the Territorial Army with appropriate experience would therefore be well advised to await the publication of further information.

Rail Transport Officer Required by the Admiralty.—A rail transport officer, between 35 and 45 years of age, is required on the staff of the Director of Movements, Admiralty. Candidates must have railway experience, preferably with service on headquarters staff, and possess a thorough knowledge of railway operations. See Official Notices on page 55.

A. C. Wickman & Co. Ltd.—The year 1946 showed a trading profit, including a dividend from a subsidiary, of £50,676, as against £77,371 in 1945. Total income was £99,606, a decrease of £22,534. After providing for taxation and allowing for E.P.T. and previous over-taxation, the net profit is £81,099, as compared with £53,369 in the preceding year. A dividend of 6 per cent. (5 per cent. last year) is proposed on the ordinary shares, after which the carry-forward of £50,762 will compare with £42,289 brought in.

The Great Western of Brazil Railway Co. Ltd.—Gross receipts for the year ended December 31, 1946, at £1,605,001, showed an increase of £1,381,779. Passenger, goods, and livestock traffic earnings were all higher, but parcels receipts fell from £79,841 to £72,235. An increase of £227,496 in working expenses, at £1,446,164, resulted in the net earnings of £158,837 being £4,274 lower. After deduction of interest, taxation, and other charges, there was a surplus for the year of £14,832. A deficit of £227,606 was brought in from 1945, and adjustment of the 1945 sinking fund and debenture interest take £24,566, leaving a deficit of £188,208 to be carried forward.

Professional Engineers Appointments Bureau.—So that its name may not be infringed this bureau has been incorporated as a company under limited guarantee. Its scope will remain unaltered, however, and those qualified by reason of their civil, mechanical, or electrical engineering qualifications are invited to register. The necessary forms may be obtained from the Registrar at 13, Victoria Street, London, S.W.1, and a stamped and addressed envelope should be enclosed with the application. Employers of professional engineers again are invited to submit concise details of positions vacant on their staffs, indicating special requirements, and stating the salary range offered.

British Fruit Importers Visit French Growers.—Twenty of the principal British fruit and vegetable importers returned recently from a twelve-day tour of the most important growing districts in the South of France. The tour was organised by the French National Railways Company to facilitate the renewal of pre-war personal contacts between British importers and French exporters. Visits were made during the tour to the refrigeration depots attached to the stations at Avignon and Perpignan, where produce is pre-cooled and loaded into insulated refrigerator railway vans. For some time now fruit and vegetables have been coming direct to London from the South of France in these vans, which cross the Channel by the Calais-Dover train ferry. In the near future the French railways hope that, in collaboration with their British colleagues,

it will be possible for the vans to run through to the principal provincial markets in this country.

Stream-Line Filters Limited.—The report for the year ended December 31 last shows a net trading profit of £39,269, as compared with £52,385 in the previous year. An interim dividend of 5 per cent. was paid last November, and after transferring £4,000 to general reserve, the directors recommend a final dividend of 10 per cent., less tax.

Road and Rail Routes on New Underground Map.—A new Underground pocket map just issued by London Transport shows the Underground lines superimposed on a background of the principal thoroughfares throughout the area served. The Central Line Greenford extension, opened on June 30, is shown on the map, and also future extensions, routes to nearly 300 places of interest, amusement, restaurants, and so on. The Underground, including the Greenford extension, now serves 260 stations, situated on 232 miles of railway. The map is free to travellers at stations and inquiry offices.

British Insulated Callender's Cables Limited.—The full accounts for the year to December 31 last show that the consolidated net profits were £2,722,143, of which £1,508,556 is absorbed by taxation. A statement by the Chairman, Sir Alexander Roger, which accompanied the report, said that the main factors preventing maximum production were the inadequate supply of operatives, and an unprecedented shortage and irregular flow of raw materials and component parts. He urged the Government to restore merchants, dealers, and middlemen to their old and experienced functions, and to give further encouragement to directors and all other grades of management.

Railway Strikes in Bombay.—Members of the staff in Bombay of the G.I.P.R. and B.B. & C.I.R. began a series of strikes on June 27 in protest against the proposed new wage scales announced by the Central Pay Commission (see our Overseas page this week). The labour troubles began on June 27, when 29 strikers were killed, and 25 were injured in the course of disturbances. On June 30, workmen at the four railway workshops in the city reported for duty at the usual time, but began a stay-in strike. A *communiqué* issued by the Bombay Government stated that later in the day some of the workmen emerged and made attempts to wreck property. To prevent further sabotage, the railway authorities decided to declare a lockout.

Southdown Motor Services Limited.—The past financial year proved a record one for Southdown Motor Services Limited from the operating point of view. The mileage run totalled some 27 million miles, an increase of approximately 6½ million miles. Passengers carried totalled over 120 million, an increase of some 7½ million. The company was able to restore all its pre-war express carriage services and its excursions and tours. In giving these facts at the recent annual meeting, the Chairman, Mr. R. P. Beddow, said that as their company was constituted at present, they had the benefit of local knowledge, local management, local pride, individuality, and tradition. All these valuable assets would be swept away if the industry was absorbed into one huge Transport Commission ultimately managed from Whitehall.

Maidstone & District Motor Services, Limited.—Traffic receipts and other revenue of the company in the year ended March 31, 1947, produced £1,633,580, to which is added £79,254 from dividends and interest. After providing for depreciation, taxation, and other charges, a profit of £286,701 is shown for the year. After adding £60,458 brought in, the directors have transferred £154,569 to reserve out of the £347,159 available. The board recommends dividends of 6½ per cent. on the cumulative preference shares,

British and Irish Railway Stocks and Shares

Stocks	Highest 1946	Lowest 1946	Prices	
			July 8 1947	Rise Fall
G.W.R.				
Cons. Ord.	61½	54½	56	+ 1
5% Con. Pref.	126½	107	118½	+ 1
5% Red. Pref. (1950) ..	106½	102½	101½	—
5% Rt. Charge	140½	122½	130½	+ 1
5% Cons. Guar.	137½	118½	129½	+ 1
4% Deb.	129½	106	120½	+ 1
4½% Deb.	129½	107	120½	+ 1
4½% Deb.	130½	114	121½	+ 2
5% Deb.	142½	125	132½	—
2½% Deb.	95½	81½	89½	—
L.M.S.R.				
Ord.	30½	26½	27½	+ ½
4% Pref. (1923)	64	52½	58½	+ ½
4% Pref.	86	75	80	+ 1
5% Red. Pref. (1955) ..	105½	97	98½	—
4% Guar.	108½	100	100½	+ ½
4% Deb.	120	103	111	+ 1
5% Red. Deb. (1952) ..	108½	105½	102½	—
L.N.E.R.				
5% Pref. Ord.	7	5	6½	+ ½
Def. Ord.	3½	2½	3½	—
4% First Pref.	59½	50½	54½	+ ½
4% Second Pref.	29½	25½	27½	+ ½
5% Red. Pref. (1955) ..	104	97	96½	—
4% First Guar.	107	98	99½	+ 1
4% Second Guar.	101	90	94	+ ½
3% Deb.	104	87½	96½	+ ½
4% Deb.	119½	102½	111	+ 1
4½% Sinking Fund Red. Deb.	107½	101½	100½	+ ½
SOUTHERN				
Pref. Ord.	79½	70	72½	+ 1
Def. Ord.	24	19½	22½	+ ½
5% Pref.	125½	107	117½	+ 1
5% Red. Pref. (1964) ..	115½	106½	108½	—
5% Guar. Pref.	137½	119	129½	+ 1
5% Red. Guar. Pref. (1957)	115½	107½	108½	—
4% Deb.	129½	105½	120½	+ 1
5% Deb.	139½	125½	130½	—
4% Red. Deb. (1962- 67)	113½	104½	106½	—
4% Red. Deb. (1970- 80)	115½	104½	107½	—
FORTH BRIDGE				
4% Deb.	109	103	100½	—
4% Guar.	105	102	97½	—
L.P.T.B.				
4½% "A"	133½	120½	124½	—
5% "A"	142½	130½	132½	—
3% Guar. (1967-72) ..	108	98½	104	—
5% "B"	128½	117½	119½	—
5% "C"	64½	56½	61½	—
MERSEY				
Ord.	34	30	33	—
3% Perp. Pref.	76	69	70½	—
4% Perp. Deb.	117½	103	109	—
3% Perp. Deb.	98	81	91½	+ 1
IRELAND*				
BELFAST & C.D.				
Ord.	8½	6	7½	—
G. NORTHERN				
Ord.	41½	30½	31	—
Pref.	63½	52	47½	—
Guar.	97½	78½	86	—
Deb.	107	97½	98½	— ½
IRISH TRANSPORT				
Common	19½	16½	13½	— 1/3
3% Deb.	107	100	100½	— 2½

* Latest available quotation

His Majesty's Colonial Service

COLONIAL ENGINEERING SERVICE

CIVIL ENGINEERS are required for the Way and Works Departments of the Government Railways in Nigeria and the Malayan Union. Qualifications entitling applicants to consideration are Corporate Membership of the Institution of Civil Engineers, or Degrees or Diplomas recognised by that body as granting exemption from Sections A and B of its examination.

Applicants must be British subjects, physically fit, and preferably not more than 35 years of age. They should have had experience of Civil Engineering work as applied to railways, both construction and maintenance, but candidates lacking this experience may be considered if otherwise well experienced in general civil engineering construction and if personally anxious to make a career in railway engineering.

All appointments will be on probation for permanent and pensionable employment, and starting salary will depend on age, civil experience, and length of approved war service.

Appointments in Nigeria will be within a salary scale which, inclusive of expatriation pay, ranges from £660 to £1,300 per annum. Furnished Government quarters are normally provided at a rent varying from £60 to £90 per annum, according to salary. Free first class passages are provided for the officer and, if married, for his wife on first appointment and on leave. Home leave on full pay is normally granted after each tour of 18 months at the rate of 7 days for each month of resident service. Outfit allowance of £50 payable on first appointment if salary does not exceed £970. Income tax at low West African rates only.

Appointments in the Malayan Union will be within a salary scale ranging from £560 to £1,120 per annum. Cost-of-living allowance varies between £125 and £154 per annum for single officers and between £182 and £224 for married officers. Allowances for children under 18 are payable at the rate of £98 per annum for the first child and £70 for the second child until the completion of the 18th year. An outfit allowance of £60 is payable on first appointment. Free passages for the officer and, if married, for his wife, are provided on first appointment and on leave. Furnished quarters are available at nominal rentals. Home leave on full pay is normally granted after each tour of 3 years at the rate of 4 days for each month of resident service.

The above salary scales are those within which the engineer would be first appointed, but good prospects exist, and will continue to exist, for promotion to posts entailing greater responsibility. Intending candidates should write at once to the DIRECTOR OF RECRUITMENT (COLONIAL SERVICE), Colonial Office, 15, Victoria Street, London, S.W.1, stating age, professional qualifications, and brief details of experience.

INTERNATIONAL RAILWAY ASSOCIATIONS. Notes on the work of the various associations concerned with International traffic, principally on the European Continent. 2s. By post 2s. 2d.

and a final dividend of 10 per cent., making 15 per cent. for the year, on the ordinary shares. In addition it is proposed to pay an ordinary bonus of 5 per cent., which will leave £192,592 to be carried forward.

Dorada Railway Co. Ltd.—A dividend of 4 per cent., tax free, has been declared again by the Dorada Railway Co. Ltd. The net profit for 1946 was £32,823, as compared with £46,420 in the preceding year.

Ealing Broadway Station, G.W.R.—Representatives of the Trade Press were shown features of the renovation of Ealing Broadway Station, G.W.R., on July 9. These features include the repainting of the station, alterations to the booking hall, and a new layout of poster boards, advertising displays, nameboards, and directional signs, which is intended to be the model for all G.W.R. stations.

British Aluminium Co. Ltd.—Mr. Freeman Horn, on reaching the retiring age, has relinquished his positions as Intelligence Officer and Manager of the Special Products Department of the British Aluminium Co. Ltd., but his services are being retained in a consultative capacity until the end of 1947. Mr. L. V. Chilton has been appointed Manager of the Intelligence Department, and Miss W. Lewis, Information Officer. Responsibility for the sale of special products is being transferred to the Sales Division under Mr.

Admiralty—Movements Department

APPLICATIONS are invited for a vacant post of Rail Transport Officer on the staff of the Director of Movements, Admiralty.

Candidates must be between 35 and 45 years of age and must have Railway experience, preferably with service on headquarters staff, and possess a thorough general knowledge of railway operations and be competent to deal with:

- Restrictions on the movement of traffic owing to temporary embargoes.
- Claims for loss and damage to Admiralty consignments and private effects belonging to naval officers and ratings.
- Rates for conveyance of traffic from Admiralty contractors.
- Questions of demurrage.

The post carries a salary range of £650 by £25 to £750 per annum, the entry point within this range being fixed according to age, qualifications and experience. The appointment will be temporary in the first instance, but subject to satisfactory service the successful candidate will be favourably considered for the post of Principal Rail Transport Officer which is expected to fall vacant in about two years' time. This post carries a salary scale of £800 by £25 to £965 per annum and is pensionable under the Superannuation Acts.

Applications giving date of birth, particulars of qualifications and experience, and accompanied by copies of testimonials, should be forwarded to the SECRETARY OF THE ADMIRALTY (C.E. Branch 1), not later than August 2, 1947, quoting Reference Number C.E. 59939/46.

STEEL STRUCTURES purchased, dismantled and removed. Industrial steel structures re-built, re-roofed and renovated. Steel factory buildings dismantled, re-erected or adapted on other sites.—**BELLMAN HANGARS LIMITED**, Terminal House, Grosvenor Gardens, London, S.W.1. Sloane 5259.

THE RAILWAY HANDBOOK provides the railway student with a collection of useful statistics and information relating to the railways of Great Britain and Ireland. In addition, in matters of international interest, such as speed and electrification progress, the book extends its scope to cover the whole world in order to present a complete picture of these increasingly-important developments. 120 pp. Demy. 8vo. Paper covers. Price 5s. By post 5s. 3d.

TRANSPORT ADMINISTRATION IN TROPICAL DEPENDENCIES. By George V. O. Bulkeley, C.B.E., M.I.Mech.E. With chapters on Finance, Accounting and Statistical Method. In collaboration with Ernest J. Smith, F.C.I.S., formerly Chief Accountant, Nigerian Government Railway. 190 pages Medium 8vo. Full cloth. Price 20s. By post 20s. 6d.

R. M. Warrington, who has recently given up his position as Assistant Development Manager to become an Assistant Sales Manager in the Sales Division and to look after unwrought and special products. Mr. S. F. Derbyshire, Manager of the Alumina Department of the Production Division, will be responsible for technical matters affecting special products.

Ch'ride Electrical Storage Co. Ltd.—The directors have declared a final dividend of 5 per cent. and a bonus of 10 per cent. on the "A" and "B" ordinary stocks, maintaining the total distribution for the year ended March 31 last at 20 per cent. The profit for the year of £761,430 compares with £486,928 in the previous twelve months.

Glasgow-Dublin Air Service.—From August 1 an air service will be provided three times daily between Glasgow and Dublin by the Eire company, Aer Lingus Teoranta. The journey is scheduled in 80 min., and the route will be operated by 21-seat aircraft. Reservations can be made through the Scottish Division of British European Airways at Renfrew.

G.W.R. Zonal Scheme Extended to Shrewsbury.—A new zone, based on Shrewsbury, was brought into operation in the G.W.R. scheme for expediting small consignments on July 1. There are now 27 zones in operation out of the total of 36 that ultimately will cover the whole system. The railroad at Shrewsbury and

South African Railways

APPLICATIONS are invited for the following posts:—

(1) **FOUR ASSISTANT ENGINEERS (SIGNALS).** Applicants must hold either (a) the B.Sc. Degree in Electrical Engineering or (b) the Matriculation Certificate (or its equivalent) and a qualification rendering them eligible for Associate Membership of the Institute of Electrical Engineers. They must have had at least three years practical experience in railway signalling since qualifying.

Salary Scale: £500-£600 × £30 = £840 per annum. A higher commencing rate of pay may be granted according to experience.

(2) **SIX DRAUGHTSMEN (SIGNALS).**

The following conditions must be complied with: (a) Applicants who served a pupillage as draughtsman, must have served a minimum period of indentureship of five years and be in possession of an educational certificate of the Matriculation standard; or

(b) Applicants who served an apprenticeship to the trade of signal fitter, must have served a period of apprenticeship and have had extensive experience in a signal engineering drawing office. They must in addition have obtained the School Leaving Certificate, and passed an appropriate technical examination not lower than the Higher National Certificate.

Salary Scale:

Grade III = £350 × 25 = £550 per annum.

Grade II = £575 × 25 = £625 per annum.

Grade I = £650 × 25 = £700 per annum.

The commencing salary will be determined with regard to ability and experience, but in no instance will a commencing salary of less than £450 be paid to candidates who served an apprenticeship to the trade of fitter.

In addition to the foregoing, a Cost-of-Living Allowance is payable, which is at present:—

Salary	Married Staff	Single Staff
Exceeding £300 p.a. but not exceeding £720	£119	£34
Exceeding £720 p.a. but not exceeding £1,080	£119	£28

The appointments will be on a contractual basis for a period of five years, and applicants should be British subjects, under 35 years of age, but suitable applicants up to the age of 45 years may be considered. Free passages will be granted for applicant and family, to South Africa, and salary at half basic rate while travelling.

Further particulars obtainable from:

THE SECRETARY,
Office of the High Commissioner for the
Union of South Africa,
South Africa House, Trafalgar Square,
London, W.C.2.

to whom applications by letter, giving full particulars and qualifications, should be addressed, not later than July 31, 1947.

sub-depots at Market Drayton and Welshpool serve an area of 1,500 square miles, in which miscellaneous traffic was handled formerly at 63 stations. Sub-depots at Oswestry and Craven Arms will be brought into operation at a later date.

Super Oil Seals & Gaskets Limited.—Speaking at the recent annual general meeting, Mr. R. H. Roberts, Chairman and Managing Director, said it was satisfying to know that their direct exports during the year had exceeded those of any previous year, and that some 50 per cent. of their products supplied to home manufacturers were destined for export as components in equipment sold abroad. They had largely developed their synthetic rubber production, including rubber mouldings for the engineering industry, and in particular their high pressure hose department had made satisfactory progress. There was an ever-increasing demand for Hyline hose from makers of pneumatic, hydraulic, and vacuum equipment, and another recent development being taken up enthusiastically was the Rouret rotary seal designed to deal with the most exacting conditions encountered in pump applications. It had been realised that their activities and those of Engineering Components Limited covered much common ground, and as a result of recent negotiations, a new company known as the Ecsos Development Co. Ltd. had been formed in which the two parent companies had equal interests.

Railway Stock Market

With international uncertainties featuring less strongly in the news, stock markets have been inclined to rally, although it soon became apparent that buyers were continuing to adopt a waiting attitude. Consequently, the recovery did not extend very far and in leading industrials did not exceed more than a few pence. Nevertheless, it was noticeable that selling was on a very moderate scale, and the prevailing assumption was that any more hopeful turn in international affairs would be sufficient to cause a strong upward movement in stock markets.

It is true that the fuel position and difficulties arising from other shortages are factors which must not be overlooked, but industrial shares are now well below best levels touched earlier in the year and in many instances it would appear that there would have to be a very heavy set-back in profits to necessitate a cut in dividend payments. Moreover, the current year will be the first to reflect benefits from the abolition of E.P.T. and in numerous cases these are likely to be substantial despite the higher profits tax.

Stock markets again have been inclined to take their cue from British Funds, a moderate rally in which created a much more confident feeling because it was attributed in the City to official support. There has been a good deal of irresponsible talk of an imminent dropping of the cheaper money policy. Although this seems inevitable as time proceeds, it is unlikely in the near future, bearing in mind that apart from other considerations, the Government's policy of nationalisation is based on cheap money, and the ability to offer to shareholders in nationalised indus-

tries a 2½ per cent. stock in exchange for their shareholdings. It has been pointed out on innumerable occasions that, particularly in the case of railway stockholders, this involves a substantial loss of income, and that a 3 per cent. stock issued in exchange would provide a much fairer compensation basis.

On the other hand, it has to be borne in mind that the rate of interest on the stock offered in exchange is of vital importance to the Government, because this may have an important bearing on the financial showing of the results of nationalised industries.

Apart from considerations of this kind, however, the growing belief is that although the authorities may well realise that in existing circumstances some easing of the cheaper money policy may be inevitable, the point has not arrived when cheaper money will have to be abandoned. The outlook for British Funds will have an important bearing on that for British Transport stock when it is issued in exchange for railway stocks and is quoted in the market.

Meanwhile shorter views prevail, and at long last various factors have combined to draw the attention of investors to the merits of home railway stocks. The recent heavy fall in gilt-edged stocks drew attention to the fact that home rails at current levels are a hedge against a fall in British Funds, bearing in mind the extent to which they are still quoted below their take-over prices. Moreover, investors who realise this have decided that now is the time to buy home rails—before the double stamp duty becomes operative. Consequently, there has been a general

advance in home rails and buyers are still in evidence. Compared with a week ago, Great Western ordinary has risen from 55 to 56, the 5 per cent. preference from 118 to 119, the guaranteed stock from 128½ to 129½, and the 4 per cent. debentures from 120 to 120½. L.M.S.R. ordinary has also improved from 27 to 27½, the senior preference from 79 to 79½ and the 1923 preference from 58 to 59. Moreover, L.N.E.R. issues also improved with the general trend, the first preference being 55, compared with 54 a week ago, and the second preference, which was helped by the unchanged 1 per cent. interim, was 27½, against 27.

Among Southern Railway stocks, the preferred was ½ better at 72½, the deferred improved ¼ to 22½, and the prior charge stocks were better including the 5 per cent. preference at 118½, a gain of 1½. Although there were fractional gains among the prior stocks, London Transport "C" has remained unchanged at 62. The remaining interim dividend decisions are being awaited with interest, and the view appears to be gaining ground that although it is recognised that last year there were some withdrawals from reserves, dividend totals for 1947 may be at least maintained, in view of the special revenue permitted to the railways in respect of 1947 by reason of Government amendments to the Transport Bill.

Among foreign rails, Argentines have been fairly steady, but Brazilian stocks continue to lose ground, and there were heavy falls in Central Uruguay stocks, further profit-taking following growing uncertainties as to take-over possibilities. Antofagasta preference lost ground.

Traffic Table and Stock Prices of Overseas and Foreign Railways

	Railways	Miles open	Week ended	Traffic for week		No. of Week	Aggregate traffic to date			Shares or Stock	Prices		
				Total this year	Inc. or dec. compared with 1945/46		Totals		Increase or decrease		Highest 1946	Lowest 1946	July 8, 1947
							1946/7	1945/6					
South & Central America	Antofagasta ...	834	29.6.47	£ 34,830	+ £ 2,530	26	£ 1,028,520	£ 819,480	+ £ 209,040	Ord. Stk.	11	10½	11½
	Arg. N.E. ...	753	28.6.47	ps. 335,000	+ ps. 27,200	52	ps. 16,668,500	ps. 15,301,400	+ ps. 1,367,100	"	17	5	11
	Bolivar ...	174	May, 1947	\$115,230	+ \$20,745	22	\$564,878	\$559,135	+ \$5,743	6 p.c. Deb.	6½	5½	16½
	Brazil ...									Bonds	30	26	28½
	B.A. Pacific ...	2,771	28.6.47	ps. 2,400,000	+ ps. 522,000	52	ps. 126,227,000	ps. 117,067,000	+ ps. 9,160,000	Ord. Stk.	8½	5½	11½
	B.A.G.S. ...	5,080	28.6.47	ps. 3,803,000	+ ps. 29,000	52	ps. 168,086,000	ps. 183,288,000	+ ps. 4,758,000	Ord. Stk.	16	10½	18
	B.A. Western ...	1,924	28.6.47	ps. 1,276,000	+ ps. 247,000	52	ps. 69,137,000	ps. 62,951,000	+ ps. 6,186,000	"	19	9½	23
	Cent. Argentine	3,700	28.6.47	ps. 3,344,955	+ ps. 242,305	52	ps. 167,474,270	ps. 163,524,446	+ ps. 3,949,824	"	10½	7½	19
	Do.									Dd.	6	4½	14
	Cent. Uruguay ...	970	28.6.47	39,127	+ 2,989	52	£ 1,921,974	£ 2,076,367	- 154,393	Ord. Stk.	8½	3½	15½
	Costa Rica ...	262	Apr., 1947	33,865	- 83	44	286,765	286,820	- 55	Stk.	15	12	11½
	Dorada ...	70	Apr., 1947	29,700	+ 400	17	119,200	115,275	+ 3,925	1 Mt. Deb.	102½	99½	104½
	Entre Rios ...	808	28.6.47	ps. 439,700	+ ps. 37,500	52	ps. 22,264,000	ps. 21,930,100	+ ps. 333,900	Ord. Stk.	9	5½	11
	G.W. of Brazil ...	1,030	28.6.47	25,000	+ 400	26	849,100	735,000	+ 114,100	Ord. Stk.	26	20	2½
	Inter. Ctl. Amer.	794	May, 1947	\$110,433	+ \$174,294	21	\$5,900,779	\$4,854,614	+ \$1,046,165	"			
	La Guaira ...	223	June, 1947	\$111,621	+ \$1,934	26	\$684,382	\$693,542	- \$9,160	5 p.c. Deb.	70	58	84
	Leopoldina ...	1,918	28.6.47	72,292	+ 6,654	26	1,647,296	1,436,662	+ 210,634	Ord. Stk.	5	3½	11
	Mexican ...	483	31.5.47	ps. 1,464,000	+ ps. 459,100	22	ps. 7,706,200	ps. 13,441,600	+ ps. 5,720,000	Ord. Stk.	1½	½	3
	Midland Uruguay	319	May, 1947	17,386	+ 5,440	48	185,778	204,277	- 18,499	"			
	Nitrate ...	382	30.6.47	12,206	+ 1,693	26	114,300	110,632	+ 3,668	Ord. Sh.	83.9	71.3	83.9
N.W. of Uruguay ...	113	May, 1947	5,882	- 975	48	60,692	61,364	- 672	"				
Paraguay Cent.	274	27.6.47	£92,231	+ £35,321	52	£3,306,526	£3,132,914	+ £173,612	Pr. Li. Stk.	78½	60	50½	
Peru Corp. ...	1,059	June, 1947	148,249	+ 10,696	52	1,825,220	1,675,574	+ 149,646	Pref.	16½	8½	8½	
Salvador ...	100	Apr., 1947	cl 45,000	+ cl 6,300	44	cl 483,000	cl 393,700	+ cl 89,300	Ord. Stk.	119½	52½	168	
San Paulo ...	153								Ord. Sh.	22.6	15.3	18.6	
Talca ...	156	May, 1947	3,700	- 95	48	44,715	36,995	+ 7,720	"				
United of Havana	1,301	28.6.47	69,837	+ 3,304	52	3,602,147	3,164,685	+ 437,462	Ord. Stk.	2	1½	2½	
Uruguay Northern	73	May, 1947	2,745	+ 673	48	15,510	19,422	- 3,912	"				
Canada	Canadian National ...	23,535	May, 1947	9,638,500	+ 1,942,500	21	43,712,250	38,638,500	+ 5,073,750	Ord. Stk.	25½	16½	17½
	Canadian Pacific ...	17,037	30.6.47	2,125,500	+ 241,000	26	37,706,250	34,863,000	+ 2,843,250	"			
Various	Barsi Light† ...	202	Apr., 1947	29,295	- 3,007	4	29,295	32,302	- 3,007	Ord. Stk.	123½	111	113½
	Beira ...	204	Apr., 1947	80,157	+ 4,547	29	624,106	508,964	+ 115,142	"			
	Egyptian Delta ...	607	20.5.47	16,535	- 433	9	83,647	81,873	+ 1,774	Pr. Sh.	9½	5	6½
	Manila ...									B. Deb.	75	60	69
	Mid. of W. Australia ...	277	May, 1947	18,688	- 1,353	48	185,999	192,189	- 6,190	Inc. Deb.	85	70	75
	Nigeria ...	1,900	Apr., 1947	354,384	+ 1,484	4	354,384	352,900	+ 1,484	"			
	Rhodesia ...	2,445	Apr., 1947	525,116	+ 1,409	29	3,817,224	3,517,969	+ 299,255	"			
	South African ...	13,323	31.5.47	1,211,000	+ 209,931	9	10,678,545	9,450,231	+ 1,228,314	"			
	Victoria ...	4,774	Mar., 1947	1,241,516	- 68,175	39				"			

† Receipts are calculated @ 1s. 6d. to the rupee